

# *The* SHIPPING WORLD

AND SHIPBUILDING & MARINE ENGINEERING NEWS



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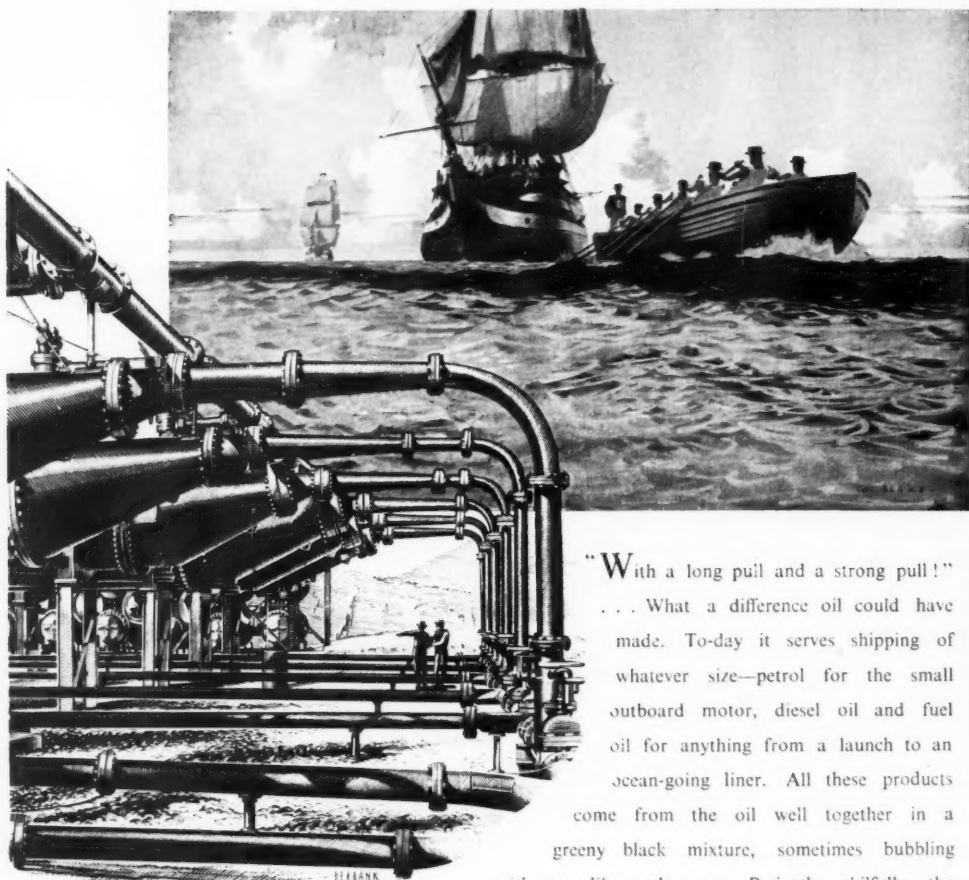
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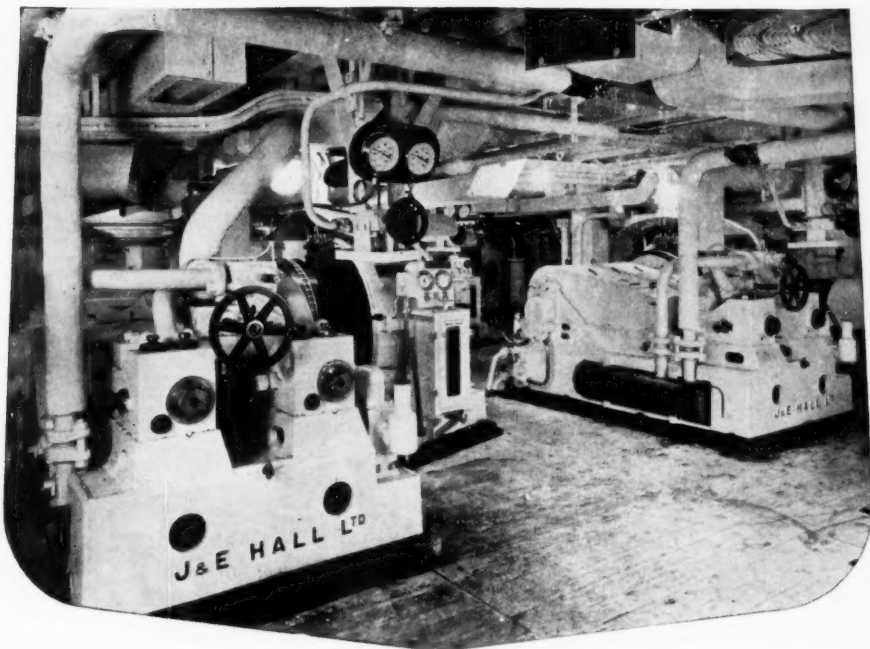
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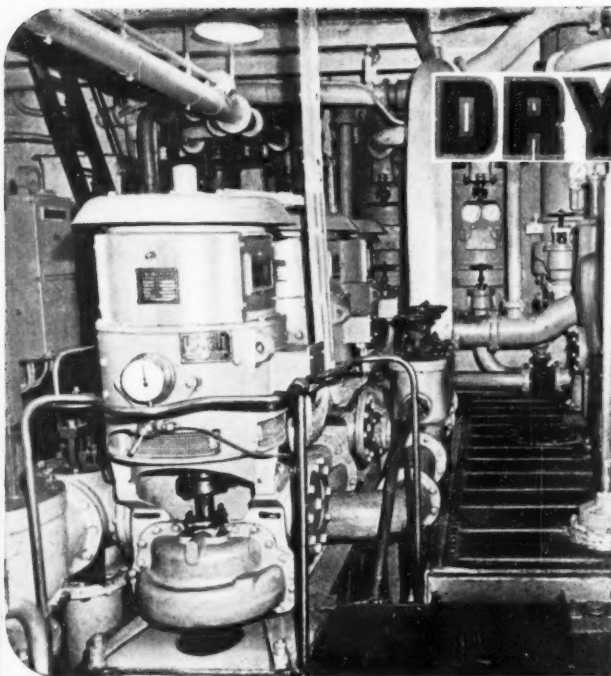
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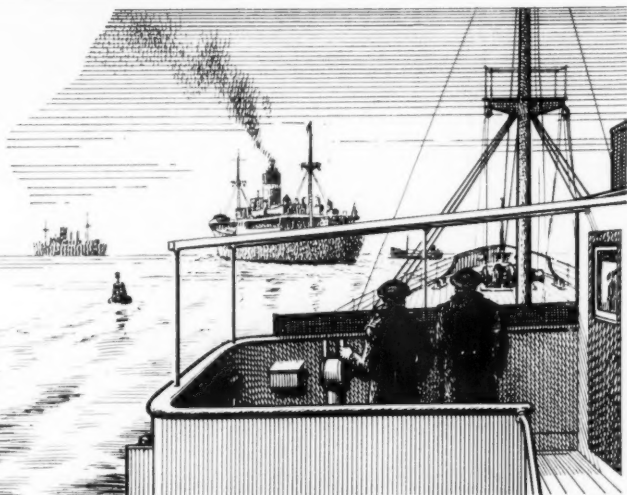
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The Oldest Weekly Journal devoted to Shipping, Shipbuilding,  
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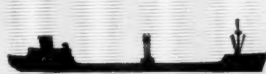
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## THE SHIPPING WORLD

# THE BENEFITS OF "HEALTHY COMPETITION"

COMPETITION is coming into fashion once more. Since the President of the Board of Trade made a plea for "healthy competition" other Ministers, as well as their supporters, have praised what was regarded a few years ago as an outmoded way of making and selling goods and services. Their hopes of nationalisation have not been realised. So far as coal, railways and probably gas and electricity are concerned, State ownership has come to stay. The problem is to introduce the competitive element into the structure of State monopoly so that the nationalised services can be made to pay. It has become apparent that the burden on the taxpayers which the monopolies have imposed cannot be increased indefinitely, otherwise the goose that has been laying the golden eggs will die. The Chancellor is taxing profits to the tune of from 50 to 60 per cent, with the result that in time of war there would be no reserve strength on which he could draw. That truth is penetrating into the council chamber at 10 Downing Street. The old faith of Adam Smith and his colleagues is no longer as unpopular as it was, in spite of the energy with which some students of the London School of Economics preach that they have found a new and better way of life.

What the outcome will be of this movement of thought it is too early to speculate, but we can anticipate a change of tactics in the nationalised industries so as to promote their greater efficiency by introducing some form of competition between various regions of the administrations as, for instance, in coalmines as well as gas, electricity and the railways. In the opinion of an experienced observer in the political sphere, until some satisfactory solution of these problems is found, we need not fear any further extension of nationalisation such as to shipping, shipbuilding and the other maritime industries. We trust that his opinion is correct. The Prime Minister and the Chancellor of the Exchequer cannot fail to be impressed by the fact that the maritime industries, exposed to "healthy competition," are not only paying their shareholders dividends, but are handing over to the Treasury not far short of £150,000,000 a year by way of taxation. They are subject to all the evils of the monopolistic basic industries but, nevertheless, they

are holding their own and are, in fact, enabling the Government to pursue its ideological way by making good the losses which the basic industries are incurring.

Perhaps the most remarkable failure has been of civil aviation. The suggestions of the shipping industry, which offered generous terms if it were permitted to operate aircraft, were rejected; indeed, they were not treated seriously. Nationalisation was to provide the country with services which would not only be more efficient than those which private enterprise could provide, but were to make profits which would go to the reduction of taxation. Experience has falsified all these official hopes. Shipping, and indeed all the associated industries, are healthy and prosperous, while those who are responsible for the operation of the air corporations spend their time in finding excuses for their deficits. They carry passengers, usually Ministers and their satellites, as well as a limited number of rich people, at non-paying rates. The taxpayers, who include no mean proportion of weekly wage earners, are financing a privileged class.

The man in the street is beginning to ask the pertinent question—"Why do ships pay their way, while aircraft do not, in spite of the fact that the former are exposed to keen competition, national and international, and the latter enjoy all the benefits of monopoly?" There is no doubt that the country is about to witness a change of thought and action in and about Whitehall as, owing to the cost of the rearmament drive, the standard of living in this country is increasingly threatened. Ministers and their supporters are worried by the course which events are taking, with gilt edged securities yielding a return of 4 per cent to investors. They realise that there is something radically wrong with the theories which they have put into practice in the past five or six years. They are trying to avert disaster by revising their methods and preaching the virtues of "healthy competition," which are so markedly exhibited by the maritime industries, to the gratification of the Chancellor of the Exchequer as he wonders how he could frame his Budget if it were not for the profits of those who provide "risk capital" and manage our fleets, shipyards, factories and workshops so efficiently.

## Current Events

### The Trend of Freights

THE *Monthly Circular* of the Baltic and International Maritime Conference publishes in full the address on "Trade Cycles and Shipping," given by Professor Ivar Hogbom, Principal of the Stockholm University of Commerce, at the recent general meeting. He began with some generalisations which there is a tendency to overlook, especially by Ministers in this country, an island which could not exist without plenty of ships, and efficient ships. Shipping, he stated, in many ways

holds a unique position among the different branches of economic activity. "First of all it is a highly international enterprise—a worldwide adventure. Its function is the exchange of goods between different regions, countries and continents. International competition and the very mobility of ships cause changes in employment and prices to spread more rapidly than in most other industries". He explained that shipping prosperity was also affected by national differences of many kinds. He suggested that in the case of shipping

there is an international freight level determining the receipts and different national levels of wages and social costs determining the expenditure. He pointed out that the internationality of the freight market, on the other hand, had statistical consequences to the shipping industry of all countries. "The conditions on the market are determined by the total demand for maritime transport in relation to the total tonnage of the merchant fleets of the world." In peaceful times, the shipping required depended on the volume of trade, and the volume of trade was an outcome of the volume of production and always it was a question of world figures—global figures. It was easy to prove, he added, that if production increased by a certain percentage, trade, and especially shipping, tended to increase at a higher rate. In times of full employment of all available tonnage this meant that freights rose rapidly until a point was reached where they became prohibitive for certain cargoes and some shippers abstained from sending their goods. That point was very high up on the freight scale, as a 10 per cent increase in the freights meant on an average only a 1 per cent increase in the c.i.f. cost of the goods, a comparatively insignificant part of a normal profit-margin in trade. In times of depression, on the other hand, the supply of freight space was very elastic, ships being laid up or commissioned according to whether the freights fell below or exceeded the running costs of the ships; the freight curve became flat-bottomed in times of depression, when ships were laid up. This, he admitted, was a simplified way of describing the price mechanism on the freight market. "But it may suffice to explain why such sudden turning points occur between depressions and booms on the freight market. It may also explain why freights fluctuate within wider limits than other prices."

### The Coal Problem

COAL EXPORTS in coming months will be only a trickle as compared with prewar shipments, owing to the fall in output of the mines and the increased consumption of our own industries. Nationalisation, in spite of the increase of wages and the provision of greatly improved welfare services, is not attracting men to the mines, nor have the workers' faith in the efficiency of the administration. The National Union of Mineworkers is about to conduct an inquiry into the administration and efficiency of the National Coal Board, including an analysis of the work and usefulness of every official earning £600 a year or more. Mr. W. E. Jones, vice-president, at the union's annual conference stated "we want to make sure that every car that drives up to a divisional or area office, or carries a member of the board's staff, is doing a useful and worthwhile job for the industry". The union's objective is to help the industry reach the highest level of efficiency and to secure the most suitable staff. At the same conference at Blackpool, a pleasant place at this time of the year, Sir William Lawther remarked that the day had gone by when they could shirk the main issue. The question of production, wages and prices must be overcome by increased productivity. Mr. Horner, general secretary, in referring to the board's plan for reorganisation of the industry over the next 15 years, which the union had accepted in principle, remarked that the original cost of £635 million, based on 1949 prices, would probably become about £1,000 million because of rising costs, or more than the national debt before the first world war. It is no small gain that it should be admitted that wages must be related to output. But, on the other hand, the railwaymen are going so far as to imply that land transport, now that it has been nationalised, must also be subsidised.

### The New Coal Board

WHAT lies behind the reorganisation of the National Coal Board must remain for the time a matter of speculation. Sir Hubert Houldsworth, the chairman of

the East Midlands Division of the Board, has been appointed chairman in succession to Viscount Hyndley, who is retiring. The appointment carries a salary of £8,500 a year—a much higher salary than of any civil servant or judge of the High Court. The other appointments are: deputy chairmen (£5,000 a year), Mr. J. W. Drummond and Sir Eric Coates; full-time members (£5,000 a year), Mr. E. Edwards, Sir Charles Ellis, Sir Geoffrey Vickers and Sir Andrew Bryan; part-time members, who will serve until next year, with salaries of £500 each, Mr. J. H. Hambro, Sir Geoffrey Heyworth, Mr. Gavin Martin, Sir Godfrey Mitchell and Alderman S. Jones. The appointment of full-time board members, including the chairman and his deputies, is made for five years. The appointment of two deputy chairmen is a departure from previous policy. Hopes are entertained that the new chairman and his colleagues will reform the administration so as to win the confidence of the rank and file of the industry. At present there is admittedly a suspicion that the administration is wasteful and inefficient. If the new board can win the goodwill of the miners, it will be congratulated by all the managements of industry who are dependent on this monopolistic industry, which even the Tories do not propose to return to private enterprise. It has the backing of the nation in entering on its duties.

### Fleet Maintenance in World War II

It is sometimes said that there is nothing completely new in naval architecture and examples are cited of hull forms, centuries old, which to all intents and purposes duplicate those of the ships designed in recent years after exhaustive experiments and methodical testing. A refutation of this general belief is contained in the extremely interesting paper given by Captain Ralph K. James of the United States Navy at the Newcastle meeting of the International Conference of Naval Architects and Marine Engineers last week. Under the title "U.S. Fleet Maintenance and Battle-Damage Repairs in the Pacific during World War II", Captain James first described the immensity of the task of providing sufficient and adequate repair facilities for the full-scale naval war in the Western Pacific. America's most advanced base was Pearl Harbour, 2,100 miles from the U.S. Pacific coastline, while between that harbour and Japan lay 3,300 miles of ocean with only small groups of islands intervening. Nowhere in that area were there any maintenance facilities from which major units of the fleet could operate. Two courses were taken, first the development of new island bases, and second, the provision of floating maintenance and repairing equipment. Captain James revealed that even prior to World War II, the United States Navy had been experimenting with an auxiliary floating repair dock which consisted of a single-piece all-steel ship-shaped floating dock with a lifting capacity of 4,000 tons. This certainly constitutes a new and most interesting approach to floating dock design. A large number of such combined ship-docks were built to serve submarines, destroyers, large landing ships and all varieties of smaller craft. Other types of steel docks of a more normal shape were built with lifting capacities of up to 100,000 tons, and it was noted from the description given that the wing walls were hinged to allow them to lie flat on the pontoon deck during towing, reducing wind resistance.

### Stresses in Propellers and Shafting

THERE CAN be few living marine engineers who have played a more valuable part in the technical progress made in marine engineering than Dr. S. F. Dorey, Chief Engineer Surveyor to Lloyd's Register and President of the Institute of Marine Engineers. It was, therefore, particularly appropriate that Dr. Dorey should give his valuable paper on "Stresses in Propellers and Propeller Shafting under Service Conditions" at Newcastle last week. This paper provides yet more examples of the way in which electronic

methods of measurement are fast becoming essential factors in shipbuilding and engineering research. The paper describes electrical resistance strain-gauge experiments made in a successful attempt to measure strains and stresses in marine propeller blades in service conditions in small vessels, while the author indicated that there were good reasons for anticipating equally satisfactory results in ocean-going ships. A good deal of the paper is devoted to service stresses in propeller shafting, a most important aspect of research in view of the considerable number of tailshaft renewals required in war-built ships. Dr. Dorey referred to the use of a standard Siemens-Ford torsionmeter transmission unit, housed in the usual torque sleeve clamped to the main shaft, which was connected in the form of an inductance bridge with the transformer unit contained in the torque indicator. The bridge was excited at 50 volts, 400 c.p.s., and the modulated output fed through an attenuator into a magnetic tape recorder and monitoring cathode ray oscilloscope. The valuable feature of this method was the ability to record directly on the tape, as with speech, complete data for each record through a separate microphone circuit. With regard to bending stresses, the Engineering Research Department of Lloyd's Register, has developed a simple strain gauge of high sensitivity, applicable to any shaft line and giving a direct measure of cyclical bending stresses from which the horizontal and vertical misalignment of the various bearings may be derived without "breaking" any shaft couplings.

### Lloyd's New Building

A YEAR ago it was announced that Lloyd's had acquired a lease of part of the blitzed site between Lime and Billiter Streets adjoining the present Lloyd's Building, with the intention of erecting new premises to meet the ever-increasing demand for space, which already has resulted in severe congestion in the Underwriting Room. Last week a model of the projected new building was on view at Lloyd's, together with drawings and plans, which afforded members an opportunity of seeing what their new home will look like in about four years time. The main feature of the new building is the Underwriting Room, occupying practically the whole of the ground floor space. It is about twice the area of the present Room, and with a broad gallery running round all four sides will provide accommodation which, it is believed, will prove adequate for many years to come. The centre of the Room will be in a light-well, round which the rest of the building will arise to some six or seven floors, with a flying bridge connecting it with the present building at second-storey height across Lime Street. The roof of the Room in the light-well will be entirely glassed in, while the ground floor windows, large and arched, will enable work to be carried on without artificial light in normal daylight hours. In the upper storeys marine insurance companies, brokers and others connected with insurance business will have offices, and this will mean that the marine insurance market will be under one roof to an even greater extent than is now the case. When completed the new building with the old will constitute the largest unit of business premises in the City and one of the largest in the world.

### Real Income Level

ALTHOUGH the events of the second half of 1950 showed a satisfactory result in the accounts of Phs. Van Ommeren N.V., of Rotterdam, for the year, the directors in their report state that it would be a fallacy to describe as satisfactory the conditions which led to that result. Present conditions, it is contended, do not form a normal basis for economic life, which can only expand in a healthy way gradually, and in peaceful conditions, accompanied by a rise in the real income level of all sections of the population. Sooner or later we must face a change in the present economic situation, which will undoubtedly reduce the receipts of shipping companies. On the other hand, if one thing is certain

it is that operating and other expenses will not show a corresponding decline, and shipping companies must set aside vast sums against the difficult times which will come when freight rates fall. The Van Ommeren concern has been fortunate in being able to make provision for depreciation on the basis of the replacement, rather than the historic, value of its fleet. The profit and loss account shows that from a total revenue of FL30.8 mn., no less than FL11.4 mn. is absorbed by depreciation and additions to reserves; general expenses take FL7.9 mn. and taxation FL4.2 mn.; while of FL6.1 mn. available for distribution (compared with FL3.5 mn. last year), FL2.8 mn. goes in dividends and FL3.5 mn. is carried forward. An article on another page shows that although the experience of Van Ommeren in 1950 was shared by other Dutch shipping companies, increases in dividends have been small. This is partly due to a tax on dividends over 9 per cent, but even without this restriction it is doubtful whether shipping companies will be able to face the decline in freight rates, when it comes, if they do not set aside every penny they can in provision for the future, since operating and building costs are not likely to pursue a similar course.

### Silver Line Confidence

UNDER the courageous guidance of Mr. Henry Barraclough, the Silver Line, Ltd., has been steering a difficult course through troubled waters in the last three years. The results for 1947 showed a profit of £138,619, but in the subsequent years losses of £119,764 and £32,164 were incurred. Last year Mr. Barraclough warned—and his warning was repeated in September—that the results for 1950 would also show a loss, but there is reason to believe that the loss of £13,005, after providing £112,421 for depreciation, which is now recorded is less than was at one time expected. The policy of the company has been, inevitably, to withdraw from the unremunerative American Pacific liner services, for which the outstanding *Silverbriar* and *Silverplane* were designed, and to engage in the open freight market with dry-cargo and tanker tramps. The two new liners have been sold, and two tankers now under construction have been fixed on a 5-years charter. The first is due for delivery at the end of this year. Meanwhile the contract has been signed for the building of a cargo steamship of about 8,850 tons deadweight, which will be delivered in May 1953, and a similar vessel built in 1947 has been purchased and immediate delivery is expected. There is justifiable confidence, therefore, that with the freight market as strong as it has been already this year the accounts for 1951 will once again record a profit; and next year the company will be in an even stronger position so long as the demand for tonnage persists.

### SAYINGS OF THE WEEK

#### BIGGER OIL TANKERS

"Some time ago I prophesied that it would not be long before tankers of 40,000 tons d.w. would be ordered. I should now have to move my target up to 50,000 tons, as one of 40,000 tons has been placed by a Panamanian company with a shipyard in Germany. This has also answered the question of how Germany is to get on her feet, for it shows that she is ready to take on anything and has to be counted as a very live competitor of all the other countries concerned with shipbuilding."—Sir Frederick Rebbeck, chairman and managing director of Harland & Wolff, Ltd.

#### DISAPPOINTING MARINE BUSINESS

"In the marine account, which is the principal business of our company, our underwriting experience has been unsatisfactory. The premium income for the year amounted to £1,742,225, against which claims paid for 1950 and previous years totalled £1,648,416. A variety of factors have contributed to this experience—the continuing high cost of shiprepairs and the fact that claims in respect of deferred repairs are heavier in consequence of the devaluation of sterling. I regret to say that this disappointing condition of affairs is likely to continue until the past two or three underwriting accounts have been run off."—Sir Ernest H. Murrant, chairman of the Economic Insurance Co., Ltd.



# ON THE "BALTIC"

CAUSES OF CONGESTION IN EAST AFRICAN PORTS

By BALTRADER

SERIOUS delays are being encountered by shipping chartered to load coal at Lourenco Marques and Durban. Some charters have been cancelled by mutual consent of owners and charterers. There is nothing new in that situation, which has arisen at intervals for many years at South African ports. It has happened, in fact, as regularly as the periodic booms in export from that part of the world. In perwar years it was a large surplus of maize for sale abroad which caused congestion and delay at the ports; but the increase of home consumption appears to have caused South African maize to disappear from the list of world commodities which occupy shipping. On the other hand, the market for South African coal has spread from the Indian Ocean and Red Sea to Europe and Australia. Pakistan has been constrained to patch up her quarrel with South Africa and to purchase from there a very large quantity of coal denied to her by another Dominion, India. Presumably this important outlet for Transvaal and Natal coal will end, or at least diminish, when Kashmir and other subjects of dispute no longer divide the sub-Continent. Home consumption of coal as well as maize is increasing in South Africa, but even if it reduces the amount released for exports it does not relieve congestion at the ports.

It is not the port facilities which are at fault; they are, in fact, highly efficient. The trouble, as always, is the inadequacy of the South African railways to deal with exceptional traffic. At present there is a heavy call for internal transport and this has been interrupted by labour trouble on the railways but in any case the trucks required to serve the export trade are insufficient. The development of Africa's big potential production will never be successful until her transport facilities are very much increased. If the advanced areas of the South are under-equipped in this respect, how much more does the handicap apply to the greater part of Africa? It is putting the cart before the horse to attempt to exploit the wealth of regions which are not easily accessible.

## Prospects of Quieter Markets

It does not seem open to doubt that the rest of the summer will be a period of quiet markets, with freights inclined to ease in most directions. The Ministry of Food appears to have covered the more urgent part of its programme of sugar chartering from Cuba and San Domingo. The same applies to its operations for getting tonnage to move the old crop wheat from the St. Lawrence; there may be comparative inaction until this year's Canadian wheat comes down to the ports, although a few vessels will be wanted for loading at Churchill. There is also quite a good demand for grain ships from the St. Lawrence on the part of Italian and other Continental charterers. The sulphur charterers have no difficulty now in covering their reduced inquiries, in contrast with their experience a few months ago. They took several ships the other day for the voyage from the U.S. Gulf to the United Kingdom at 125s. and 120s., a fall of 17s. 6d. per ton.

Small and medium sized vessels are in good demand for timber from Finland to the United Kingdom; they suit a market which has not followed the general downward trends. For large tonnage, especially if it is of good type, attractive employment offers on time charter basis; both American and British charterers, the latter mostly liner companies, have much cargo to move from the Western to the Eastern Hemisphere.

Everyone knows that the Korean war has swollen freights throughout the world, and one asks how much of the unnatural distortion will be removed if peace returns to that unlucky country. No guess is of value

as to the prospects of a more general pacification of the world, but if this happy event should occur there is plenty of healthy trade which will be released. Eastern countries in particular await the opportunity to recover and increase their prewar prosperity, which will contribute to the employment of all the economical tonnage available. One thing is certain, namely, the future high cost of fuel and of labour in the construction, operation and repair of ships and the handling of cargoes. Rates of freight will have to be higher than in the past, but the time will come sooner or later when it will be difficult to cover the expense of operating vessels of wartime vintage. American tramp tonnage will probably be unable to remain in commission at all on commercial terms. Many owners, among whom the Greeks of London and New York are prominent, have been able to earn large sums for investment in new and efficient tonnage; they are able to face the future with confidence. Unfortunately, British owners, operating solely in this country, have been discouraged by the Government's policy of taxation.

## The Freight Markets

A fair volume of business has been concluded in the freight markets during the past week, with rates tending to ease further in most trades. The banning of coal exports from South Africa for July owing to the "go slow" strike on the railways and the consequent wagon shortage has caused early ships on that market to take what business they can elsewhere. There has accordingly been an outburst of chartering for coal from Calcutta at lower rates, and fixtures include Calcutta to Australia at 133s. 9d. for September, a decline of 16s. 3d., Calcutta/Finland at 126s. 6d., July, Calcutta/Sweden, 117s., July, and Calcutta/Alexandria, 93s. 9d., September. Two oil burners have also been taken with delivery South Africa for the trip home via West Africa at 35s. and 37s. per ton deadweight per month respectively, a considerable fall on previous business. There is a dearth of inquiry from Australia the only fixture reported being the *Ravello*, Full Range Australia to West Italy at 115s. per ton bulk wheat, a decline of 7s. 6d. per ton. From North China fixtures have been concluded to the Continent for cereals at the lower rates of 167s. 6d. and 165s., basis Antwerp or Rotterdam discharge, and from the North Pacific a vessel is chartered to the U.K. at 150s. heavy grain. The Mediterranean market is slightly easier, with 57s. 6d. accepted from Bona to the U.K. for August loading and 90s. Black Sea/U.K. Full rates continue to be paid for timber from the Baltic.

On time charter the main activity has been for trips out to Australia, and fixtures include *Hartington*, 10,220 tons d.w., 493,000 cu. ft. bale, 11 knots on 10 tons diesel oil, delivery U.K., redelivery Australia, 62s. 6d.; *Norden*, 8,325 tons d.w., 453,000 cu. ft. bale, 12½ knots on 9½ tons diesel oil, delivery Denmark, trip out via United States and Canada, redelivery Australia, 62s. 6d.

MR. DERYCK ABEL has been appointed directing secretary of The Free Trade Union and editor of *The Free Trader* in succession to the late Mr. E. G. Brunker. Mr. Abel has been secretary and assistant editor since 1945.

THE International Air Transport Association will hold its seventh Annual General Meeting in London from September 10 to 15. In previous years it has met at The Hague, Brussels, Montreal, Cairo, Rio and San Francisco. This year's host airlines will be B.O.A.C. and British European Airways. Sir Miles Thomas, chairman of B.O.A.C., is president-elect of I.A.T.A. The meetings will take place in the hall of Westminster School.



# DUTCH SHIPPING AND SHIPBUILDING

IMPROVING FINANCIAL RESULTS : LARGE TANKER ORDERS

By THE SHIPPING WORLD'S Own Correspondent

"CHANGES in the world economic situation are occurring so rapidly that it is just impossible to give any reliable forecast for the near future. We are continuously thinking in terms of a third world war while we are still engaged in solving intricate problems arising from the second war." These words by Mr. J. P. Kruseman, president of the Dutch Shipowners' Association—who has since been succeeded by Jhr. H. G. A. Quarles van Ufford, of the Royal Dutch/Shell group—at the recent annual meeting, nicely sum up the present thoughts of Dutch shipping circles. The past year has been a good one after the first six months had seen a decline in demand for space. The favourable situation continues, but it should not be forgotten that it is a result of abnormal circumstances.

In a previous article in THE SHIPPING WORLD, 1950 was characterised as a good year on the whole for Netherlands shipping. This has since been proved by the annual reports and the dividends of several shipping companies. Although a surtax on dividends over 9 per cent restricts payments to shareholders, the following dividends have been announced so far: Holland America Line 9 per cent (same), Maatschappij Nederland 9 per cent (12 per cent in jubilee year), Van Nievelt, Goudriaan & Co. 10 per cent (9 per cent), Hollandse Stoomboot Maatschappij 7 per cent (same), Furness Scheepvaart Mij. 10 per cent (9 per cent), Koninklijke Nederlandse Stoomvaart Mij. (KNSM) 7 per cent (same), Verenigde Nederlandse Scheepvaartmij. 5 per cent (nil), Phs. Van Ommeren 9 per cent (same), Koninklijke Nederlandse Paketvaartmij. 9 per cent (same) and Koninklijke Java-China Paket 9 per cent (6 per cent). On the whole the reports for 1950 are satisfactory. The Holland America Line, for instance, reported an increase of 10 per cent in gross profits. Van Ommeren saw profits rise from 3.5 to 6.1 million guilders, while KNSM report 20 per cent more income from freight. Hollandse Stoomboot Mij. report a gross profit of 3.68 million guilders (2.98 mn.) and Van Nievelt, Goudriaan & Co. an increase from 5.4 to 7.9 million guilders. Most spectacular is the rise in net profits recorded by Verenigde Nederlandse Scheepvaartmij. Against a profit of only 0.22 million in 1949, 1950 saw a profit of 3.47 million.

Overall figures for income from shipping have not yet been prepared, but the Dutch Central Bureau of Statistics has recently published the figures for 1949, which compare favourably with those for 1948. In 1949, net income from the Dutch merchant fleet was £1,483.4 mn. (£29.2 mn.). Gross receipts were £1,964 mn. (£39.1 mn.), divided as follows: freights 780 mn., passengers 159.7 mn., ships chartered by foreign operators 16.3 mn., compensation received from abroad 2 mn. and other receipts from abroad 6 mn. Expenses amounted to 480.6 mn. (£29.9 mn.). Receipts from shipping are

the most important on the Dutch list of "invisible" exports. According to the Shipowners' Association, net revenue in foreign currencies in 1950 was fl. 355 mn., against fl. 299 mn. in 1949, for the ten largest shipping companies. In Parliament, however, the Minister of Finance recently stated that the rise on the freight market in the second half of 1950 did not result in an increase in receipts in foreign currencies over the whole year. He gave receipts from freight as fl. 259 mn. in 1950 compared with fl. 272 mn. in 1949. The difference in these two statements may result from the fact that the Shipowners' Association's figures include investments in foreign currencies as well.

## Increasing Merchant Tonnage

The Dutch merchant fleet has again increased since the figures for October 1, 1950, and preliminary figures for December 1, 1950, were given in THE SHIPPING WORLD of January 10. On April 1 the Dutch fleet was as is shown in Table I. The most striking increase is that for ships under 500 tons gross. On April 1, the number of these ships was 111 per cent of that in 1939 and their deadweight tonnage 139 per cent. On January 1, 70 coasters of 48,000 tons d.w. were on order or building, and since then about 30 more of 20,000 tons d.w. have been ordered, practically all for Dutch owners. Yards in the province of Groningen, centre of the coaster building industry, in 1950 alone built 32 coasters of 19,650 tons.

Several factors caused this increase. First, the number of coastal shipping companies increased, new companies being attracted by the satisfactory conditions. Coastal shipping means hard work for the crews, but cases are known of owner/captains who sailed their ships "free" in three years. Profits are on the decline now, but are still reasonably good. Secondly, several shipping companies hitherto employing only larger ships have gone into coaster operation, using the smaller vessels on short runs or as feeders in overseas operating centres, for example, Latin America. Moreover, some industrial concerns which did not employ ships before the war, now use their own coasters for the transport of raw materials and finished products. Examples are Bols, the gin makers, and Bruynzeel, a wood finishing industry at Zaandam. Lastly, several people not formerly interested in shipping have invested their money in coasters, chartering these to shipping companies and agents.

The average size of new coasters in 1950 increased to 614 tons d.w. and has again increased in the first five months of this year. Recently a coaster of 1,000 tons d.w. was launched. The average age of the Dutch coaster fleet now is 11.2 years against 7.3 years in 1939. Of the total deadweight tonnage, 38 per cent is in the

TABLE I. THE DUTCH MERCHANT FLEET  
(Ships of 500 tons gross and over)

	1 September, 1939			1 October, 1950			1 April, 1951		
	No.	Tons gross	Tons d.w.	No.	Tons gross	Tons d.w.	No.	Tons gross	Tons d.w.
Passenger ships	49	552,038	385,647	35	360,513	254,504	35	364,994	257,229
Cargo and passenger ships	35	162,469	177,896	31	134,416	139,194	31	134,416	139,194
Cargo ships	400	1,481,517	2,155,752	393	1,746,032	2,482,435	404	1,771,929	2,513,188
Tankers	109	528,029	740,962	114	608,944	862,607	114	614,673	869,962
Troopships	—	—	—	3	22,883	31,936	3	22,883	31,936
	593	2,724,053	3,460,257	576	2,872,788	3,770,676	587	2,908,896	3,811,509
(Ships of under 500 tons gross)									
Cargo ships	522	125,226	158,556	559	161,128	209,965	575	169,228	221,241
Tankers	14	4,682	5,928	17	5,337	6,346	18	5,815	6,796
	536	129,908	164,484	576	166,465	216,311	593	175,043	228,037
Total	1,129	2,853,961	3,624,741	1,152	3,039,253	3,986,987	1,180	3,083,939	4,039,546

TABLE II. SHIPS UNDER CONSTRUCTION (OR ON ORDER) FOR DUTCH OWNERS ON APRIL 1, 1951  
(Ships of 500 tons gross and over)

	No.	Dutch yards		No.	British yards		No.	German yards		No.	Total	
		Tons gross	Tons d.w.		Tons gross	Tons d.w.		Tons gross	Tons d.w.		Tons gross	Tons d.w.
Passenger ships	3	38,600	12,300	—	—	—	—	—	—	3	38,600	12,300
Cargo and passenger ships	—	—	—	—	—	—	—	—	—	—	—	—
Cargo ships	16	79,800	111,220	2	13,000	19,050	2	17,000	24,000	20	109,800	154,270
Tankers	5	56,100	88,500	2	10,000	12,600	—	—	—	7	66,100	101,100
	24	174,500	212,020	4	23,000	31,650	2	17,000	24,000	30	214,500	267,670
(Ships of under 500 tons gross)												
Cargo ships	93	40,895	63,915	—	—	—	—	—	—	93	40,895	63,915
Tankers	1	500	700	—	—	—	—	—	—	1	500	700
	94	41,395	64,615	—	—	—	—	—	—	94	41,395	64,615
Total	118	215,895	276,635	4	23,000	31,650	2	17,000	24,000	124	255,895	332,285

0.5 years group against 32 per cent in 1939. In the old age groups there are 9 per cent (1939: 2 per cent) of 21-25 years and 6 per cent (5 per cent) of over 25 years. Vessels less than 15 years amount to 63 per cent (88 per cent), which is a satisfactory level and will be improved after the many coasters now building will have been completed.

The quantitative rehabilitation of the Dutch fleet having been completed in 1950, the Dutch companies are now beginning with qualitative rehabilitation. Although 73 per cent of the Dutch fleet is younger than 15 years (1939: 61 per cent) it should not be forgotten that many ships are of the utility types not suitable for Dutch companies which largely depend on regular services requiring specialised ships. Moreover, there are too many ships of very high age, whereas there is a shortage of medium tonnage ships.

#### Building Programmes

Building costs are restricting new orders, especially for passenger ships, but several companies are beginning to replace their oldest ships. Their building programmes are now for replacement rather than for extension or rehabilitation as in the past years. A good example of this is given by Maatschappij Nederland. This company recently put two cargo ships of about 7,500 tons gross (*Bintang* and *Billiton*) into service, and has four more on order. Two of these, each of 10,800 tons gross, will be ready in the middle and end of next year; the other two, each of 9,000 tons gross (speed 16 knots), will be completed in March 1953 and at the end of 1953 respectively. The latter ships were ordered ahead of schedule because of long delivery times. All are for normal replacement. Incidentally, this company now figures maintenance costs at 6-7½ cents per ton d.w. per day compared with a prewar figure of 2½ cents.

Koninklijke Rotterdamse Lloyd have ordered a 10,500 tons gross cargo ship in Germany for delivery in the summer of next year and a 10,500 tons gross motor cargo ship with accommodation for 12 passengers for delivery in the middle of 1953 from C.v.d. Giessen & Zonen's Scheepswerven, Krimpen a.d. Yssel. Verenigde Nederlandse Scheepvaartmij. also ordered a motor cargo ship (13,500 tons gross) in Germany for delivery in the summer of 1952.

So far only two Dutch private shipping companies, Phs. Van Ommeren and N.V. Gebr. Van Uden, are operating tankers. These will, in 1953, be followed by two other companies. Van Nievelt, Goudriaan & Co. have ordered one 18,500 tons d.w. motor tanker 532.5 ft. long from Nederlandse Dok en Scheepshouw Mij., Amsterdam. The engine will be a 7-cyl. double-acting two-stroke Stork engine of 7,500 h.p. Speed on trials will be 15½ knots. Delivery is for the beginning of 1953. In the same year Wilton-Fijenoord, Schiedam, will complete a 17,500 tons d.w. tanker for Stoomvaart Mij. Oostzee. Moreover, Phs. Van Ommeren have ordered one 19,500 tons d.w. motor tanker from Wilton-Fijenoord and one 14,500 tons d.w. motor tanker from P. Smit jr., Rotterdam. It is hoped that new orders will follow, as the Dutch tanker fleet is thought to be surprisingly small.

Ships building or on order for Dutch owners on April

1 are shown in Table II. On December 1, 1950, 61 ships of over 500 tons gross, totalling 429,500 tons gross, were under construction (or ordered) in Dutch yards. Since then many new orders have been received and on the whole Dutch shipbuilders at this moment cannot accept any orders for delivery before the middle of 1953. Some yards are fully booked until 1954, and Nederlandse Dok en Scheepshouw Mij. at Amsterdam even have enough orders to last at full capacity well into the early months of 1955. Dutch yards are also busily engaged on repairs. As mentioned above, two Dutch shipping companies have been compelled to order ships from a German yard because of long delivery times. The German yards now being fully booked with orders until 1953, there is no substantial immediate competition, but with restrictions as to size, speed, etc., removed from the German shipbuilding industry Dutch shipbuilders fear heavy competition in the future.

It is to be expected that financial results over the current year will be satisfactory, as were those over 1950. This is shown by the reports over the past year. Dividends announced so far are: Wilton-Fijenoord 8 per cent (7 per cent), Rotterdamse Droogdok Maatschappij 12 per cent (10 per cent), Nederlandse Dok en Scheepshouw Maatschappij 8 per cent (7 per cent) and Amsterdamse Droogdok Maatschappij 12 per cent (same). Wilton-Fijenoord reported an increase in gross profits in 1950 from fl. 6.3 to fl. 9.6 mn. and N.D.S.M. from fl. 3.2 to fl. 5.2 mn.

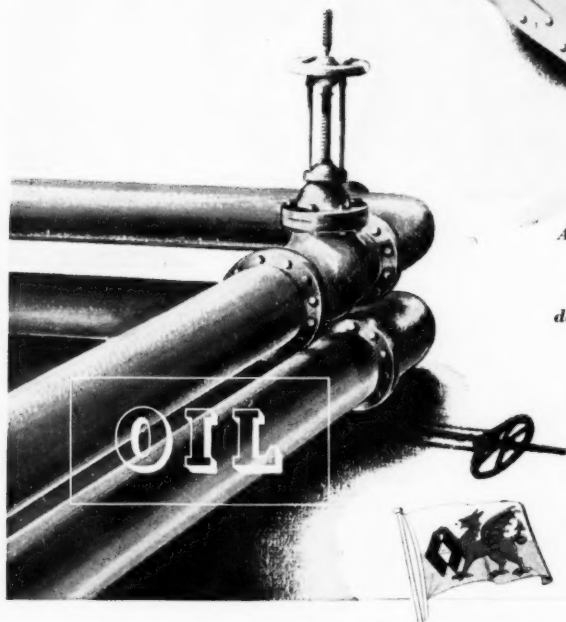
Not all contracts for new ships signed this year have been announced but those made public show that the following orders were received up to June 10: 14 cargo ships totalling 85,250 tons gross, of which 7 (35,100 tons) are for foreign owners; 2 cargo and passenger vessels of 14,200 tons gross, both for Finland; 26 tankers of 156,200 tons d.w., of which 7 (106,200 tons d.w.) are for foreign owners (the Shell order being counted as for Dutch owners) and about 30 coasters of 20,000 tons d.w.

#### New Tankers

Most striking is the large number of tankers. The most important order is, of course, that by the Royal Dutch/Shell group for 14 tankers of 18,000 tons d.w. each and one of 28,000 tons d.w. The two most recent orders are one for two vessels of 28,000 tons d.w. each from Respond Tankers, Ltd., Edinburgh—the first British order for N.D.S.M. since the war—and one for two tankers of 10,000 tons d.w. each from the Creole Petroleum Corporation, an associate company of Standard Oil of New Jersey. The tankers for Respond Tankers will have a twin-screw turbine installation of 12,550 h.p. and a speed of 17 knots. The tankers for the Creole Petroleum Corp. will be built by Rotterdamse Droogdok Maatschappij and C.v.d. Giessen en Zonen, Krimpen. They will have a draught of only 21 ft. 11 in. as they will be used between Lake Maracaibo and Aruba. Hitherto only ships of up to 5,000 tons could be used in this service. The ships will have triple-expansion engines of 4,000 i.h.p. and a speed of 12 knots. Of the 26 tankers ordered this year, no fewer than nine of 189,500 tons d.w. will be built by N.D.S.M. This yard now probably has the largest order book in Holland, certainly for tankers. The

(Continued on page 28)

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# COAL AND OIL

## A NEW COAL CRISIS?

DESPITE the more satisfactory trend in the coal mines earlier this year, there are signs that yet another coal crisis may be expected in the coming winter, if not before. The Minister of Fuel and Power expressed his uneasiness at the way things are going when he spoke to the Conference of the National Union of Mineworkers last week. He admitted that stocks of coal are being accumulated at a lower rate than had been hoped, and were now several hundred thousands of tons behind the target set for this stage in the year. The trouble may be said to have started with the beginning of the "official" summer in the mines on May 1. When Saturday shifts were given up, there was a general relaxation among the miners: output per manshift, which might have been expected to go up with the smaller number of shifts being worked, actually went down slightly. There seems little doubt that many of the miners were influenced last winter by the exhortations of the Government, and did their best to respond by higher output. But the effect of such methods is never permanent; enthusiasm cannot be kept up indefinitely by speeches. What is needed is a system of payment by results in which the scale of payment rises sharply as a good week's output is approached. There are, no doubt, many obstacles to such a scheme, but if the National Union of Mineworkers wishes its members to get full value for the extra wages they are hoping to secure, it must make sure that there is a corresponding rise in output. Only if this is so will the wages buy more goods.

### Increased Consumption

THE TROUBLE is in part, of course, caused by the considerable increases in inland consumption that have occurred in the years since the war. Mr. Noel-Baker told the Mineworkers' conference that between 1946 and 1950 coal consumption had increased by 16,000,000 tons. Of this, 4,500,000 tons went to householders, and another 9,000,000 tons to industry. The rate of increase is quickening, and in 1950 some 7,000,000 tons more than in 1949 were used. Much of the coal used in the United Kingdom is used very inefficiently, and the installation throughout the country of modern furnace and heating equipment would certainly save many millions of tons annually. There is already in existence a Fuel Efficiency Committee, which was appointed to advise on how domestic and industrial equipment could be improved and better used. The Minister is hoping for large scale and relatively speedy results from this committee. In addition, he is appointing a further committee to inquire into "the wider aspects of national fuel policy". Whether an important subject is not being immersed in a multiplicity of committees remains to be seen: if results are forthcoming, no one will grudge the Minister an additional committee or two. But whatever the final outcome, it is unlikely that results will materialise sufficiently quickly to improve things this winter. It therefore looks as though coal exports, already at a low level, will be further curtailed soon. It provides useful employment for the shipping industry to spend the summer carrying British coal out of this country and the winter carrying American coal into it, but it cannot be suggested that this is really a satisfactory state of affairs, and it is unlikely to happen again.

### Shorter Items

SIR HUBERT HOULDSWORTH has been appointed chairman of the National Coal Board in succession to Lord Hyndley, who is retiring. Sir Hubert has been chairman of the East Midlands Division of the Board. His new appointment takes effect on August 1. Two new deputy chairmen have been appointed: they are Mr. W. J. Drummond, at present chairman of the North-Western Division of the Board, and Sir

Eric Coates, formerly chairman of the Overseas Food Corporation. Another newcomer to the Board is Sir Andrew Bryan, Chief Inspector of Mines.

ADVICE has been received by Cory Brothers & Co., Ltd., from Wm. E. Meyer & Co., Ltd., that the price of bunker coal at Bermuda is now 230s. per ton.

## OFFICIAL NOTICES

### New Company

WESTPORT SHIPPING CO., LTD., 87 Bishopsgate, London, E.C.2. Registered June 25. Nominal capital: £1,500 in £1 shares. Directors: I. Caldwell, 62 Union Street, Greenock; and L. G. W. Boxberg, 48 Abbey Lodge, Regents Park, London, N.W.8.

[Information from *Jordan's Daily Register of New Companies*]

## RECENT PUBLICATIONS

*Rope Talks* No. 25, published by British Ropes, Ltd., contains a fine selection of interesting illustrated articles, including a short account of the *Kon-Tiki* expedition and a description of Trinity House Wharf, where maintenance and repairs are carried out.

A new edition of the official handbook to the Port of Sunderland has been prepared by the River Wear Commissioners and the Sunderland Corporation. It contains the fullest information on port facilities and charges, accompanied by many illustrations and maps.

The current number of *The Shipyard*, works magazine of Swan, Hunter & Wigham Richardson, Ltd., and Barclay, Curle & Co., Ltd., is a special issue devoted entirely to a description of the French passenger liner *Provence*, recently completed at the Neptune yard.

### Chairs for Industrial and Office Use

Three new additions have been made to the comprehensive range of chairs for office and industrial use manufactured by the Tan-Sad Chair Co. (1931), Ltd., Avery House, Clerkenwell Green, London, E.C.1. They consist of a folding wall bracket seat, a swing bracket seat, and a swing bracket "posture" seat. Correct posture is an important factor in maintaining health and efficiency for office and factory workers, and this matter has been carefully studied by the Tan-Sad company in its designs for seats for various occupations. An example is the "Victor" model V/22 chair designed for drawing office use. It is fitted with an aluminium foot-ring 3 in. wide. The full range is described in a booklet entitled "Tan-Sad Industrial Seating Service."

### Marine Radio Equipment

Lieut-Commander R. I. T. Falkner, the newly appointed sales manager of Rees Mace (Marine), Ltd., marine radio equipment specialists, reports that the interest in both H.F. and V.H.F. radio is growing daily. France, Fenwick & Co., Ltd., operating 12 tugs on the Tyne and ten on the Wear, all fitted with low band single-frequency simplex system V.H.F. installations, estimate that four tugs fitted with V.H.F. do the work of five not so equipped. New users of Rees-Mace equipment include Charrington, Gardner Lockett (London), Ltd., London lightermen and wharfage contractors, and the Alpha Towage Company, of Greenwich, which has equipped three tugs with the sets. All the sound reproduction equipment for the newly commissioned *Oronsay* was installed by the firm. The features of the *Oronsay* equipment will be on the Rees Mace stand at the Engineering, Marine and Welding Exhibition at Olympia. The Rees Mace organisation also markets the Dolphin Marine radio-telephone, which is the cheapest R/T set, approved by the G.P.O., for yachts and small coastal craft. One of the Dolphin range is equipped with Consol navigation facilities. The firm has acquired a yacht which will be fitted with Rees Mace marine radio equipment for demonstration purposes and will soon make its maiden voyage up the Thames.



## Port Delays in Australia

Nationalisation of Sydney Ferries

By a Special Correspondent

COMPARATIVE figures for cargoes arriving in Sydney in May, 1950, and May of this year are not encouraging. Last May, the total cargo handled (excluding bulk oil, coal and metal) was 198,674 tons, compared with 252,211 tons in May, 1950. In Sydney an analysis of the slow turnaround position attributes port congestion to work rate and overtime bans by wharf labourers, the 40-hour week and the shortage of lighters. In spite of this shortage, only a few lighters are being built, largely because the 1939 cost of £A850 is now in the vicinity of £A5,500. The decision by the Government to apply for the deregistration of the Waterside Workers' Union was announced on June 8 following prosecutions under the Crimes Act of the union's general secretary (J. Healy) and the former Brisbane branch secretary (E. C. Englart).

### Free Labour Force

This year has been a stormy one on the waterfront. In January, a refusal by Mr. Justice Kirby to grant the full CAI basic wage rise to waterside workers resulted in a nation-wide ban on overtime. In June, the first free labour force used on Australian wharves since 1928 was used in the port of Mackay, Queensland, when farmers loaded the *Wellpark* with raw sugar after dockers had refused to load the vessel because of a ban on New Zealand shipping. Previously, in Melbourne, troops were used on the *Port Halfpenny* when wharf labourers refused to work it. It is thought that in the future, troops will be used in large ports and voluntary labour in the small ports when wharf labourers refuse to work on urgent cargo. On June 19, 1,300 Sydney watersiders went on strike, leaving nine overseas ships and six coastal vessels without labour following a second refusal of a basic wage review.

Sydney ferries, which for generations have played an important part in the life of Sydney harbour, have now passed from private to State ownership. On June 30, the New South Wales State Government took over Sydney Ferries, Ltd., gaining thereby 15 large ferries, various wharves, 12 tugs, three steam lighters, 69 deck lighters, hoppers,errick lighters, well punts, shiways and valuable land on the far-shore. The ferry service, which carries some 7,500 passengers, had ceased to be a paying proposition, but Sydney Ferries, Ltd., has handled about one-third of the total lighterage service of the port of Sydney.

## DUTCH SHIPPING AND SHIPBUILDING

(Continued from page 26)

Amsterdam builders now have 27 ships building or on order, of which 19 are tankers totalling 376,000 tons d.w.

The raw materials position, especially as regards steel, is more difficult than last year. It is estimated that 150,000 to 160,000 tons of steel, at least 80 per cent of which are in plates, are needed per year by the Dutch shipbuilding industry. For sections the "Hoogovens," Ymuiden (by far Holland's largest steelworks and the only producers of plates) have a long-term exchange contract (raw iron for sections) with the British steel industry and therefore sections do not cause trouble. Production of plates, however, is only about 80,000 tons per year, entirely for home consumption. As Britain has stopped all exports to Holland, except for existing contracts, and Germany has also cut deliveries substantially, the remainder has to come from Belgium and France. It is rumoured that German deliveries have been partly cut to make more steel available to the German shipbuilding industry. Therefore, the Dutch orders for German yards have been received in Dutch shipbuilding circles with certain misgivings. Luckily, however, the Hoogovens are considerably extending their capacity and, in a few years, will be able to supply the entire home market except for special heavy weights and large dimensions. There remains the question what influence the Schuman plan will have on the distribution of steel throughout Western Europe.

## Belgian Shipping

Shipments for Belgian Congo

By a Special Correspondent

MAINLY owing to the revival of demand for sea transport caused by the war in Korea and by rearmament during the second half of 1950, which contrasted with some dull periods experienced during the first six months of that year, the Compagnie Maritime Belge (Lloyd Royal) was able to increase its working surplus for the year under review to Belg. Francs 284,200,000, an increase of more than 12 per cent over the figure of Fr.253,300,000 reached in 1949. After higher depreciation on the fleet and shore plants and after providing for other commitments, there resulted a net profit of Fr.77 mn., as compared with Fr.60 mn. a year previously. The dividend paid amounted to Fr.165 net per share (Fr.150). In the past year, the share capital was increased from Fr.165 mn. to Fr.1,000 mn.

As at the end of 1950, the company's fleet consisted of 29 vessels totalling 438,000 tons displacement, its book value having been increased to Fr.1,928,300,000 from Fr.1,819,700,000 a year previously. The company, therefore, accounts for about one-half of the number of Belgian deep-sea vessels. These totalled 61 units of 407,181 tons gross at the end of 1950 of which more than 50 per cent were motor vessels. The total included eight tankers of 97,340 tons d.w. The outlook for the further expansion of the Belgian merchant fleet has been described as uncertain against a background of certain demands by the shipping circles, in which higher tax-free depreciation rates in good years and other measures of tax alleviation figure prominently. In 1949, Belgian owners benefited from State credits totalling Fr.130,800,000.

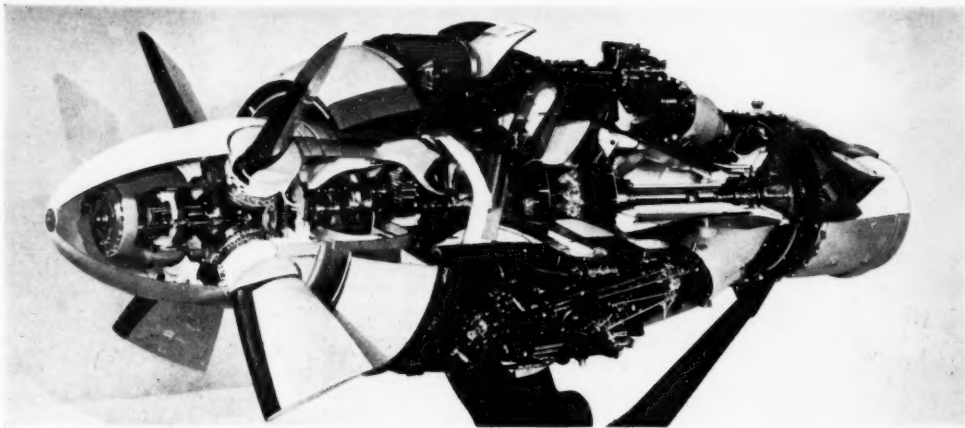
### Development of Dar-es-Salaam

Close cooperation between British and Belgian interests relating to the development of the port of Dar-es-Salaam, Tanganyika's main port, was the object of an agreement signed in London early in April. This agreement fits in the framework of a scheme for the improvement of the port facilities at Dar-es-Salaam, evolved in close collaboration with the East African Railways and Harbours administration. Dar-es-Salaam is to become the main port for Belgian goods imported for the eastern and southern regions of Belgian Congo, as well as for commodities to be exported overseas from those areas. Dar-es-Salaam is connected by a 780-miles metre-gauge railway with Kigoma, the main port on the eastern shore of Tanganyika Lake (half of which is located in Tanganyika), while there are steamer services operated by the Chemin de Fer du Congo Supérieur aux Grands Lacs Africains between Kigoma and Albertville, the main port on the western (Belgian) shore of the lake. Albertville is the easternmost terminus of the railway system in Belgian Congo. Belgium is to contribute £1,000,000 to wards the cost of building a special quay at Dar-es-Salaam, particularly, though not exclusively, intended for Belgian vessels.

### Motor Yacht Cruising

The Norwegian ensign flying from the halliards of a white-painted cruising yacht is by no means an unusual sight at Southampton. During the past few winters the Bergen Steamship Company has run the motorship *Venus* on cruises to Madeira and the Canaries, and during the summer months this year James Burness & Sons, Ltd., of 7 Kingsway, London, W.C.2, are operating the motor yacht *Cort Adler* in a series of six cruises to Bayonne and Lisbon, from Southampton. The cruises occupy 13 days each and inclusive passenger rates range from £70 to £95 from Waterloo, including all shore excursions and meals, and hotel accommodation at Biarritz, or Lourdes. The *Cort Adler*, an ocean-going motor yacht, is an ideal ship for those who prefer this type to the ocean liner of almost exactly the same tonnage as the King of Norway's yacht *Norge*, she was once owned by Barbara Hutton, the millionairess.

In the *P.L.A. Monthly* for July, "Shanwa" writes: The cheapness of sacks is relative to the rise and fall in the price of the commodity they carry. At the old price of £60 per ton for coffee a gunny bag was cheap as 1s. 6d. Nowadays when coffee fetches £400-£500 per ton a bag would still be cheap at 10s. The only question that remains is—will the price of the container fall when the contents go back to normal values?



## THE GAS TURBINE

A BRITISH ENGINEERING TRIUMPH

By E. N. B. BENTLEY

WHEN Frank Whittle's gas turbine engine made the world's first successful jet-driven flight in May 1941, in the Gloster E.28/39 designed by George Carter and flown by the late "Jerry" Sayer, it was the end of many years planning and hoping for Whittle and the beginning of Britain's supremacy in the internal combustion gas turbine. As with so many triumphs of engineering, it was not so much the idea that earned justifiable fame for the inventor, but rather the engineering genius which transformed the idea into a practical achievement.

Sir Frank Whittle's contribution to aeronautical engineering is somewhat analogous to that of Sir Charles Parsons in marine engineering. In developing a power unit on such entirely new principles the problems to be overcome are formidable, both in complexity and number. The design of lightweight combustion chambers and of turbine blades for continuous and reliable operation at a glowing red heat are but a part of the problem in which the gas turbine engineer is involved. Extremely accurate design and manufacture is required for the blades, past which the hot gases may be flowing at a speed of 1,000 m.p.h., and extremely accurate balance is required in a turbine rotor and the blades set round its periphery, when turning at 15,000 r.p.m. All this, of course, has to be achieved with the absolute minimum of weight, otherwise the power plant is quite useless for aircraft purposes.

The essential parts of an internal combustion gas turbine are the compressor at the front end of the shaft, the turbine at the other end of the shaft and, surrounding them, the combustion chambers. The compressor may be of the centrifugal type, such as the single-sided de Havilland Ghost or the double-sided Rolls-Royce Nene, of large diameter with a few sturdy blades, generally similar to a centrifugal pump. Or it may be of the axial flow type, such as the Armstrong-Siddeley Mamba, with ten stages in the form of impeller wheels with multitudinous small blades similar to the turbine. The turbine may be of the single or two-stage type, but its blades work in the combustion gas stream which, although cooled by the

excess air which is passed into the combustion chambers for that purpose, is still at a temperature of 800 degrees or so. The combustion chambers are arranged round the outside of the turbine and may consist of eight large ones, as in the Bristol Theseus, or 16 small ones, as in the de Havilland Goblin. A more unusual arrangement is the annular combustion chamber used in the Armstrong-Siddeley Sapphire. Air from the compressor is mixed with paraffin in the combustion chamber and the burning gases, on their way out to the jet pipe, turn the turbine and hence the compressor which is on the same shaft.

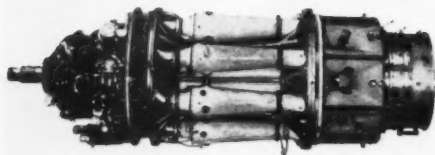
The power produced by the gas turbine may be used either directly in the form of a jet which produces a forward thrust at the engine; or by using the turbine to drive a propeller. The pure jet is obviously much simpler and lighter, and all the first successful gas turbines were of this kind, thus allowing for concentration on the manifold and complex problems of the gas turbine itself, without the additional complications of the propeller drive. The pure jet becomes more and more efficient as the speed of the aircraft approaches the speed of the jet efflux, say 1,200 miles an hour. Conversely the efficiency is poor at moderate speeds, so that the jet is a very inefficient means of propulsion at speeds much below 500 m.p.h. At the more moderate speeds of 300 to 400 m.p.h. the turbo-prop is much more efficient than the turbo-jet unit, in spite of the extra weight, complication and cost of the propeller with its gearing and controls.

### The First Turbo-Jet

The first turbo-jet to go into service was the Welland, built to Whittle's design by Rolls-Royce in 1943. Installed in the Gloster Meteor I, they helped to shoot down the German V1 flying bombs in 1944. This engine was later developed into the Derwent, the latest version of which develops 3,600 lb. thrust at 14,700 r.p.m. for a weight of 1,280 lb. and an overall diameter of 43 in. The de Havilland Goblin was also type-tested in 1943 and the later versions, weighing 1,630 lb. and with a diameter of 50 in., produce a thrust of 3,500 lb. These engines are used in the de Havilland Vampire fighter. The Rolls-Royce Nene of 5,000 lb. thrust, weighing 1,755 lb. and of 49½ in. diameter, is used in the Hawker Sea Hawk of the Royal

The illustration above shows the Rolls-Royce Dart engine used to power the Vickers Viscount airliner

## Monthly Air Transport Section



Side view of the Bristol Proteus propeller turbine engine

Navy and in the Supermarine Swift fighter of the R.A.F. Under the name of the Pratt & Whitney J-42 Turbo-Wasp it is built in America and installed in the U.S. Navy Panther aircraft. A still more powerful engine, the Rolls-Royce Tay (6,250 lb. thrust) is also known in America as the Pratt & Whitney J-48 Turbo-Wasp and used in the F93A Sabre fighter. Both the Nene and the Tay are also being built under licence in France by the Hispano-Suiza Company. The Rolls-Royce Avon is a departure from previous practice, being of the axial compressor type with a stated thrust of 6,500 lb., although the general opinion is that it is now developing considerably more than is stated. This engine is in large-scale production for the English Electric Canberra bomber, which is being built in the United States as well as here, and also for other new aircraft, including later versions of the de Havilland Comet.

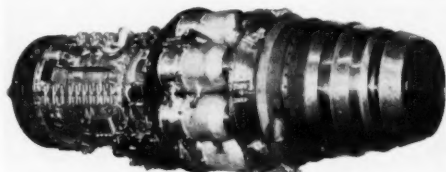
## Used in the Comet

Four of the de Havilland 5,000-lb. thrust Ghost engines, of 53 in. diameter and weighing 2,218 lb., are installed in the de Havilland Comet, the first and only jet-driven airliner in the world. These engines are a somewhat larger version of the Goblin and have a maximum speed of 10,250 r.p.m. This smoothly flying 100,000-lb. aeroplane with a cruising speed of 430 knots has since broken several city-to-city records, and is now undergoing service trials on B.O.A.C. routes. The most powerful jet engine so far announced is the Armstrong-Siddeley Sapphire, an axial flow engine. Developed from a Metropolitan-Vickers design, having a thrust of 7,200 lb. This unit weighs 2,500 lb. and has the unusually small diameter of 32½ in., which is largely accounted for by the annular combustion chamber.

The gas turbine having proved itself in many forms as a jet propulsion unit was, by that very fact, limited to use on very high speed aircraft. But the harnessing of this new form of power to a propeller, which is much more efficient at moderate speeds than is a jet, was by no means an easy problem. For one thing, the propeller shaft has to be geared down to one-tenth, or less, of the speed of the turbine. For another, the proper matching of the automatic propeller pitch control to the throttle opening and r.p.m. of the turbine is an exceedingly tricky piece of engineering. The first turbo-prop unit to fly was the 600-h.p. Rolls-Royce Trent, a development of the Derwent, in a Gloster Meteor in September 1945. Also among the earliest of

the turbo-prop units was the ten-stage axial flow Armstrong-Siddeley Mamba, which first flew in 1947. Starting at 1,000 h.p., it now develops 1,320 h.p., at 15,000 r.p.m., for a weight of 780 lb. (not including the propeller) and a diameter of 31 in. Following its 150-hours civil and military type test, it successfully completed a 500-hours endurance test. It is installed in the four-engined Armstrong-Whitworth Apollo airliner and several other civil and military aircraft. An interesting development is the Double Mamba, in which two Mambas, side by side, are geared together to drive coaxial contrarotating propellers. To save fuel in cruising flight, or in case of one engine stopping, the propeller of that engine can be stopped and feathered while the other engine and propeller carry on the good work. The Fairey Gannet anti-submarine aeroplane, in production for the Royal Navy, uses this engine. The first British transport to fly with turbo-prop units was the Rolls-Royce Dart-engined Vickers Viscount, in July 1948. It was also the first in the world to receive a certificate of airworthiness for passenger carrying. The Dart has a two-stage centrifugal compressor and a two-stage turbine, has a diameter of 38½ in. and weighs 930 lb.; the maximum shaft horsepower of 1,400 is developed at 14,500 r.p.m.

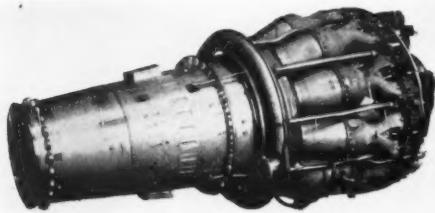
The first of the really high-powered turbo-prop units was the Armstrong-Siddeley Python, used in the Westland Wyvern naval fighter. This compact unit is of the double-reverse flow type. The air enters an annular opening near the rear end, turns through 180 degrees and so forward through the 14-stage compressor, at the end of which it is turned back through another 180 degrees into the eleven combustion chambers. For a weight of 3,250 lb. and an overall diameter of 54½ in., it develops 3,670 h.p. at the moderate speed of 8,000



The Rolls-Royce Avon engine

r.p.m., the power being absorbed by two contrarotating four-bladed propellers. The Bristol Theseus also follows the prevailing fashion, in the large turbo-prop units, of a somewhat tortuous path for the air. This necessary characteristic, to avoid an impossibly long and unwieldy unit, certainly appears to have no adverse effect on the efficiency. The air enters an annulus at the front of the engine, passes through an eight-stage axial flow compressor, then through a centrifugal compressor, along ducts to the rear of the engine and then forward into the combustion chambers.

A unique feature of the Bristol turbo-prop engines is that separate turbines, on separate concentric shafts, are used for driving the compressor and for driving the propeller. By thus separating the propeller drive from the high-speed rotating mass of the compressor, propeller control is rendered much easier, and so also is engine starting. The Handley-Page Hermes V uses four of these 2,200 h.p. engines, each weighing 2,205 lb. and having a diameter of 54 in. Developed as a power plant for the huge Brabazon Mark II and Princess aircraft, the 3,200-h.p. Bristol Proteus is actually smaller in diameter, at 38½ in., than the Theseus, and weighs 3,050 lb. In this engine the air enters at the rear and then goes forward, through a 12-stage axial flow compressor, to a centrifugal compressor and then back through the combustion chambers to the turbines at the rear. As in the Theseus, one turbine drives the



The de Havilland Ghost engine



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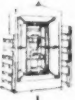
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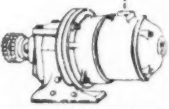
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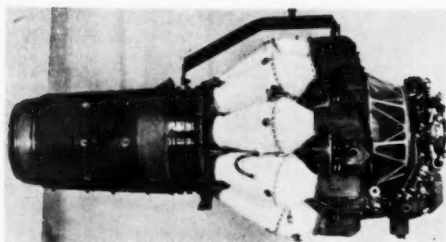
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## Monthly Air Transport Section



The Rolls-Royce Nene jet-propulsion engine

compressor and the other, on an independent coaxial shaft, drives the propeller reduction gear. For the two big aircraft a coupled Proteus installation is now under test. With this arrangement the two units are geared together to drive a large contrarotating propeller; for cruising, one engine can be stopped, the other still driving both hubs of the contrarotating propeller. Four single Proteus units will be installed in the large Bristol Britannia airliners now being built for B.O.A.C.

## Power rather than Economy

The gas turbine has developed rapidly in the ten years since the first successful flight, mostly in the direction of greater power rather than greater economy. This is perhaps inevitable in an engine which has spent the first few years of its life under artificial stimulus of war. It is so easy to forget that because the turbine produces vast power, it therefore demands vast quantities of fuel. In fact, its appetite, of over 500 gallons an hour for the larger engines, is such as to set a severe problem not only to the aircraft designer, but also to those who have to transport and store fuel, especially for war purposes. The axial flow engine undoubtedly has a lower specific fuel consumption than the centrifugal type, and the trend is definitely towards the axial. However, it is more critical in operation and certainly so in materials and manufacture, when one considers that anything upward of 1,500 accurately machined blades may be required for one engine.

Although the gas turbine produces power in a smooth and effortless fashion, it also brings many problems in its wake. Not the least of these is that it is efficient only at heights such as require cabin pressurising with its associated complication, weight and expense. For the military aircraft there are the additional problems associated with compressibility when flying at speeds near to that of sound. Nevertheless the gas turbine, mostly as a turbo-jet for military aircraft and as a turbo-prop for civil aircraft, is the future power unit for all but the small types. Perhaps its greatest contribution to civil aviation is the reduction in fire risk, due to using paraffin instead of petrol.

## New Zealand Air Service

Two Bristol Freighters of Airwork, Ltd., which are to operate the New Zealand Government Railway's Cook Strait freight service, completed their delivery flight from Blackbushe to Blenheim in 13 days. The aircraft were flown from England by crews of Strait Air Ferry Express, Ltd., a subsidiary of Airwork, Ltd., who will operate the service. The Cook Strait freight service has been in operation since early 1947, originally operated by the R.N.Z.A.F. and later by New Zealand National Airways Corporation. It is anticipated that use of the Freighters, with rose-opening doors and special quick loading gear, will result in a marked increase in the amount of cargo carried. It is expected that freight will be carried over the Strait at the rate of 15,000 tons per annum initially, later increasing to over 25,000 tons. Freight is delivered to Paraparaumu and Woodbourne by rail, and rapid aircraft turnaround is an important factor affecting the economics of the scheme. With mechanised loading, the Freighters are expected to cut by half an hour the present loading time of some 50 minutes.

## Air Freight Market

## Increase in Inquiries

THERE has been some increase in the volume of inquiry on the air freight market, and many spot orders have resulted in fixtures. Lambert Brothers, Ltd., in their market report, state that orders for the movement of ships' crews from India and the Far East continue to predominate, although the absence of outward cargoes, due mainly to the tightening of regulations necessitating import licences to the Far East, makes it difficult for operators to quote competitive rates.

Among recent fixtures reported are a Tudor to carry 55 seamen from Hong Kong to Liverpool, two Halifax flights with cargo from London to Malta, and one from Prestwick to Malta. A York aircraft has carried an auxiliary engine from Stavanger to Melbourne, while another York uplifted 6,000 kilos of cargo from London to Bagdad, returning with 40 passengers from Cairo to London. Other fixtures include Viking flights carrying 24 passengers from London to Balawayo, 20 passengers from London to Basle, and 28 passengers from London to Copenhagen.

## FIVE FIRMS BUILD HELICOPTERS

## Plans for Jet-Powered Rotors

Five of the 20 main British aircraft construction companies are now building or planning to build helicopters. The latest constructor to open a helicopter division is Percival—builders of the Prince feeder liner. Two others, Bristol and Westland, have helicopters coming regularly off their production lines and two more, Fairey and Saunders-Roe, recently acquired the helicopter firm of Cierva. Helicopters with one and two piston engines are in production and plans are going forward for much larger machines, driven by jet engines, for carrying up to 100 passengers or 15 tons of freight.

Several leading engine companies are working on the design of power plants for new helicopters. Alvis are already in quantity production with Leonides piston engines for the small Royal Navy Dragonfly helicopter, for the four seat Bristol Sycamore and for the bigger two engine Bristol 173 for British European Airways. Alvis are now considering building a double Leonides. This will enable twin engines to be fitted easily into the larger helicopters. Another piston-engine company, Blackburn, has converted its Bombardier engine for use in a new version of the Cierva Skeeter.

Design studies for large jet-powered helicopters have been prepared by several firms. Westlands have announced plans for a machine with three large or six small jet engines, capable of carrying 100 fully equipped troops. This helicopter, the W.85, would weigh 80,000 lb., with rotor blades 110 ft. across (about the wing span of a Halifax bomber). Fairey's have begun preliminary development work on a helicopter driven by two gas turbines. It is a 23-seater, with a cruising speed of 134 miles an hour. The two engines will be fitted outside the fuselage, not inside as in all present helicopters.

## Tropical Trials for Helicopter

Flown from England in the hold of a Bristol Freighter, a Bristol Type 171 Mk. 3 helicopter arrived in Khartoum on June 22 for tropical trials, which will be carried out in collaboration with the Ministry of Supply. Rotor blades and rotor head were loaded separately, but the complete fuselage of the Type 171—almost 42 ft. long—was loaded in one piece by being canted at an angle across the hold. To facilitate loading, a pulley was secured to the floor of the hold and the helicopter fuselage mounted on a two-wheel bogey.

## New British Flying Boat Service

A new flying boat service is opening up on what was the world's first flying boat route 30 years ago—Southampton to the Channel Islands. The service, a weekend one, will be operated by Aquila Airways between Southampton and Jersey. Aquila will be using Short Hythe flying boats, similar to those used on the London-Madeira service. The four-engined Hythe, civil version of the famous Short Sunderland carries 27 passengers in a lounge fitted out in typical flying boat comfort.



## TANKER WITH LARGEST DOXFORD ENGINE

MACHINERY OF THE NORWEGIAN TANKER "POLARBRIS"

TRIALS have taken place of the motor tanker *Polarbris*, built by Barclay, Curle & Co., Ltd., for Melsom & Melsom, of Larvik. The 6-cylinder Doxford opposed-piston airless-injection engine, manufactured by the shipbuilders, is the largest engine of its type so far built in Great Britain. The designed speed of 15.25 knots was comfortably exceeded on trials.

It is interesting to note that Doxford type engines have been built in America having a cylinder bore 813 mm. and a combined stroke of 2,413 mm. As far as can be ascertained, however, their running speed does not exceed about 95 r.p.m.; thus the maximum powers developed per cylinder in the British-built Doxford compare favourably with those of the American type.

The principal particulars of the *Polarbris* are as follows:

Length overall	566 ft. 3 in.
Length b.p.	530 ft.
Breadth moulded	72 ft. 6 in.
Depth	40 ft. 6 in.
Gross tonnage	12,552 tons
Deadweight tonnage	18,360 tons

Built to the highest class of Lloyd's Register, the *Polarbris* is constructed on the combined longitudinal and transverse system of framing. There are nine cargo oil tanks, each divided into three compartments by a continuous longitudinal bulkhead, two pump-rooms being situated between the tanks. Four powerful steam pumps are provided, each capable of discharging from any compartment and transferring from any compartment to any other through a system of pipelines on the ring main principle. A powerful stripping pump is also installed in one of the pumprooms. Deck sprinkling and steam smothering arrangements are provided to comply with the latest Panama Canal requirements, and a complete Butterworth tank cleaning system is installed.

The accommodation, which is of a high standard, is designed to meet the requirements of Norwegian law. Officers, engineers and crew are all berthed in separate cabins, while the captain, chief engineer and chief officer each have a suite of rooms. The heating and ventilating system was designed and installed by the Winsor Engineering Co., Ltd., Glasgow. Air distribution throughout the ship is effected by means of Winsor "Zephyr" louvers. The galley is fitted with a mechanical supply and exhaust system designed to give an even distribution of air and ensure comfortable working conditions for the crew.

All auxiliaries are steam driven. The two boilers are of the cylindrical multitubular composite type having three furnaces. The two wing furnaces in each boiler are arranged to utilise waste heat gases from the main engines or burn oil fuel. The centre furnace is fitted for fuel burning only. The working pressure of the boilers is 180 lb. per sq. in., with Howden's forced draught. The oil burning system is by Wallsend Slipway & Engineering Co., Ltd.

The air and circulating pump is of the dual type supplied by Dawson & Downie, Ltd., who also supplied two vertical duplex pumps for the fuel valve cooling service. The salt water circulating and fresh water cooling pumps are driven by an enclosed forced lubricated engine supplied by Drysdale & Co., Ltd. There are two similar units. The two forced lubrication pumps, two oil fuel transfer pumps and the domestic fresh water and sanitary pumps and boiler feed pumps were all supplied by G. & J. Weir, Ltd.

### Main Engine

The main engine is of the Barclay, Curle-Doxford type having six cylinders of 750 mm. bore with a combined stroke of 2,500 mm. The service power of 8,000 b.h.p. at 104 r.p.m. is developed with an m.i.p. of 85 lb. per sq. in. for this vessel, which gives an ample reserve of power since this size of engine is designed for a service power of 8,500 b.h.p.

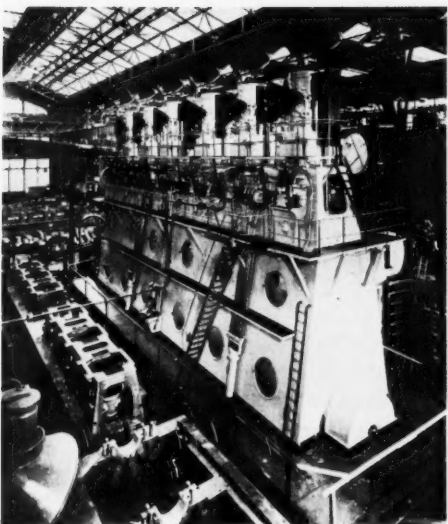
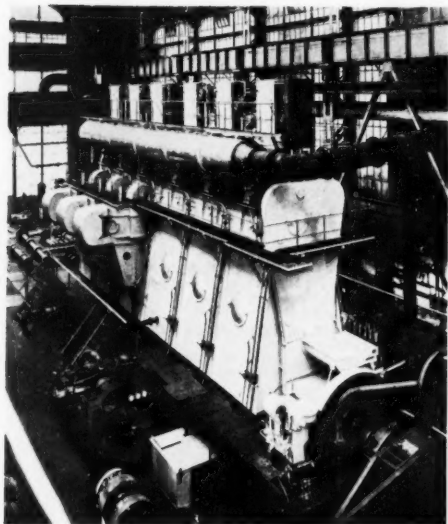
Scavenge air is supplied by three scavenge pumps on the back of the engine, driven by levers and links from the centre crossheads of the three forward cylinders. The bore and stroke of the scavenge pumps are 1,800 mm. and 658 mm. respectively, a capacity which ensures an ample excess quantity of air. The camshafts and fuel pump are driven by an adjustable 3-in. pitch chain. In accordance with the makers' practice the side rods are bolted at the bottom end to the side crossheads, and their patented swinging arm type of upper piston water service is incorporated, in place of the rubber hose type. For turning the engine in port a twin-cylinder steam engine is geared to the aft combined flywheel and turning wheel. A Doxford Bibby detuner is fitted at the forward end of the crankshaft to prevent trouble from torsional critical vibrations.

During the test bed trials of the engine for the *Polarbris* a mechanical efficiency of 88.3 per cent was obtained. No alteration was made to the usual fuel valve settings, and while special high lift cam peaks had been prepared for use if necessary, these were not

required. No variation was made to the standard design of the fuel valves, which thus have a wide range of application from 680 i.h.p. per cylinder, for the smaller engines, up to the present maximum of 1,510 i.h.p. This figure will be approximately 1,600 i.h.p. for the more highly rated engine.

Crank sequence (ahead) is 1, 4, 2, 6, 3 and 5, and further design test data for the *Polarbris* engine were:

Designed compression pressure	389 lb. per sq. in.
Designed i.h.p.	9,050 at 104 r.p.m.
Cylinder constant	0.1702
Brake constant	300
Load at the brake	23,050 lb.
Mechanical efficiency	88.5 per cent



The Barclay, Curle-Doxford diesel for the "Polarbris" on the test bed, showing (below) the front view looking aft, and (above) rear view, showing lever-driven scavenge pumps

## ROUND THE SHIPYARDS

Work in Progress in Northern Ireland

By THE SHIPPING WORLD'S Own Correspondent

AFTER carrying out two launches in June and raising the output of the Belfast yards to nearly 80,000 tons, Harland & Wolff, Ltd., began the second half of the year with a further launch on July 2, making a total of seven. The latest ship to reach the water is the *France Stove*, the last of a series of oil tankers of 24,000 tons d.w. for Norwegian owners, in this case Lorentzen's Rederi Company, of Oslo. When he spoke after the launch the chairman of this company, Mr. Jorgen J. Lorentzen, announced that Skibs A/S Belships, of Oslo, with which he is also connected, have placed an order with Harland & Wolff for a further motor-driven oil tanker of 18,500 tons d.w. with a speed of 15 knots. The keel of this vessel is to be laid down at the Govan yard.

In June, Harland & Wolff also received orders for three cargo and passenger liners. Two of these are from the Port Line, Ltd., the berths being booked both at Belfast and Govan pending settlement of the specifications. The third is from Royal Mail Lines, Ltd., and is for a repeat, with certain improvements, of the *Loch Garth*, a steamship of 9,200 tons with part refrigerated capacity and accommodation for 12 passengers, built at Belfast in 1946. In addition, Harland & Wolff are to supply diesel machinery for two cargo vessels each of 10,000 tons d.w. to be built by Short Brothers, Ltd., Sunderland.

### A Possible Order

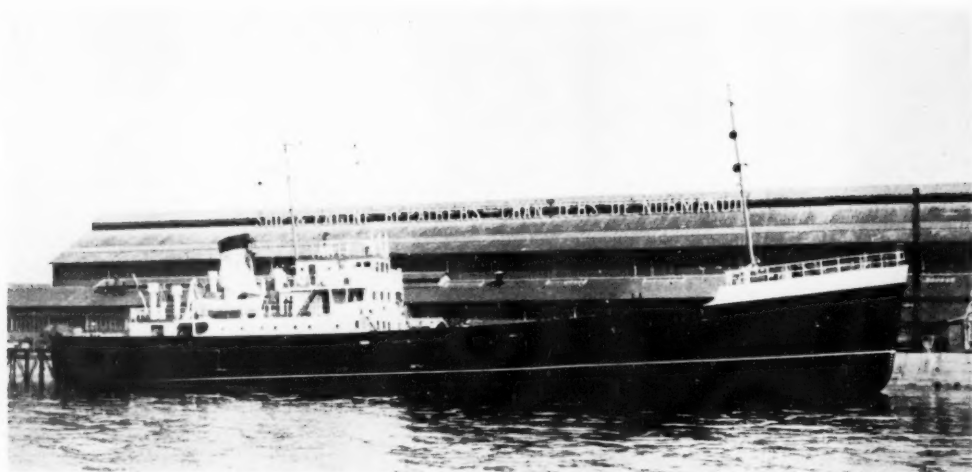
At the launch of the *Kenya Castle*, the second of the three intermediate liners for the Union-Castle Line, Sir Frederick Rebbeck mentioned the possibility of an order for a fourth ship, but as yet there has been no report of negotiations having been concluded. As the *Kenya Castle* and her sister ship the *Rhodesia Castle* are in the water, together with the *Port Nelson* (launched two days earlier), two oil tankers and the whale factory ship *Juan Peron*, the fitting out department has come to the end of a quiet spell and it will be fully engaged for a long period. It is also working on the aircraft carriers *Eagle*, *Centaur* and *Bulwark*, the first-named being due for commissioning in October.

Seventy of the delegates to the International Conference of Naval Architects and Marine Engineers visited the Belfast shipyards and engineering works of Harland & Wolff, Ltd., on July 2.

### Mooring Launches for the Levant

Six mooring launches have been built for the Iraq Petroleum Company by John I. Thornycroft & Co., Ltd., at Hampton-on-Thames, and will be shipped in the course of the next few weeks to the Levant, where they will be in service from the port of Banias in connection with the oil pipeline. Although Thornycroft's have built similar vessels in recent years for a number of oil companies, the present boats incorporate certain features to meet the requirements of the Iraq Petroleum Company, with whose marine department the builders cooperated in the design. The boats are 40 ft. in length, with a beam of 11 ft. 10 in., and draught of about 3 ft. 9 in. The planking is of 1½ in. thick mahogany and, as a protection against the bumping which may be expected against the buoys, the forepart of the hull is planked with a second skin of mahogany for a distance of about 10 ft. from the stem. The hull is sheathed with copper to a suitable distance above the waterline. The large engine room is installed with a Thornycroft type RL6 diesel engine, developing 110 b.h.p. at 1,500 r.p.m. This drives through a 3:1 gear, and with this power the boat has a speed of slightly over 9 knots.

The Frigidaire Division of General Motors, Ltd., has produced a new booklet entitled "Frigidaire in Britain." Illustrated is the cocktail bar of the new Argentine liner *Presidente Peron*, for which Frigidaire supplied the complete auxiliary refrigerating equipment.



**Cross-Channel Cargo Motorship "Brest"**

The first of three sister ships intended for the cross-Channel cargo service of the French Railways, operated jointly with the British Railways, has been completed by Chantier de Normandie, Grand-Quevilly. She is the *Brest*, of 999 tons gross, a twin-screw motorship designed for the carriage of general cargo and uncrated motorcars between Dieppe and Newhaven. Her principal dimensions are 237 ft. 11 in. length o.a., 223 ft. 1 in. b.p., 34 ft. 5 in. breadth moulded and 16 ft. 11 in. depth. On a maximum draught of 11 ft. 5 in. she has a corresponding deadweight of 420 tons, while her full load displacement is 1,322 tons. There are two cargo holds and tweendecks which are served by two hatches of 35 ft. 7 in. and 34 ft. 1 in. in length respectively, both being 11 ft. 11 in. wide. The twin screws are driven by two diesel engines supplied by the parent company of the shipbuilders, Chantier et Ateliers de St. Nazaire Penhoet. These units are of the M.A.N. type with seven cylinders, each engine developing 1,000 h.p. at 240 r.p.m. The service speed of the *Brest* is 14 knots. Two ships of similar type, the *Nantes* and *Rennes* have been completed in recent years and are in service.



**French Passenger Liner "Ville de Marseille"**

The *Ville de Marseille*, a fast passenger motorship, is the first of two sister ships for the Bordeaux-Casablanca service of the Cie. Generale Transatlantique. Built by the Forges et Chantiers de la Mediterranee, La Seyne, the *Ville de Marseille* is of 9,378 tons gross and has accommodation for 861 passengers. She is of 465 ft. 11 in. length o.a., 446 ft. 2 in. b.p. and 63 ft. 10 in. breadth moulded. With a draught of 21 ft. 6 in., she has a deadweight of 2,200 tons and a displacement of 8,660 tons. A total of 861 passengers can be carried by the vessel. Comfort of the passengers is increased by the installation of a Denny-Brown stabiliser. There are five cargo holds, two forward and three aft of the machinery space, with a total capacity of 166,310 cu. ft. The cargo capacity includes 88,275 cu. ft. of refrigerated cargo space. A twin-screw vessel, the *Ville de Marseille* has a service speed of 20½ knots, with the machinery developing 14,000 h.p. The propelling machinery has been supplied by the shipbuilders and comprises two single-reduction geared turbines of Parsons type. Steam is supplied by three boilers working at a pressure of 850 lb. per sq. in. and 896 deg. F. temperature. The second of the two sister ships, the *Ville de Tunis*, is completing afloat at the Lorient Naval Yard.

## NEW CONTRACTS

## Yards in Great Britain and Northern Ireland

Shipowners	No. of Ships	Type	Approximate Tonnages		Dimensions (ft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
			Gross	Deadweight						
Det Bergenske Damps.	2	Cargo liners	—	6,800 (each)	—	—	—	—	—	Alex. Stephen
Betships Co., Ltd., Skibs A.S., Oslo	1	Tanker	—	18,500	—	—	Diesel	—	—	Harland & Wolff, Govan
Alva S.S. Co.	1	Cargo	—	10,850	—	—	B. & W. diesel	—	Harland & Wolff	Bartram & Sons
Cable & Wireless	1	Cable ship	—	—	—	—	—	—	—	Swan, Hunter & Wigham Richardson, Walker Blyth D.D.
Straits S.S. Co., Singapore	1	Pass. cargo	—	700	—	—	Diesel	—	Ruston & Hornby	Burntisland S.B.
Cia. de Nav. Oriental de Panama, Panama	1	Cargo	—	10,500	—	—	Diesel	4,900	Sulzer Bros., Winterthur	Burntisland S.B. (sub-contracted to Hall, Russell)
J. & A. Brown & Abernethy Seaham Collieries, Sydney, Aus.	1	Self-trimming collier	—	1,800	—	—	Diesel	1,230	British Polar Engines	Burntisland S.B. (sub-contracted to Hall, Russell)
North American Shipping & Trading Co. (London)	2	Tankers	—	32,000 (each)	—	15.5	Gear'd turbine	—	Shipbuilders	Vickers-Armstrongs
Sir R. Ropner & Co. (Management)	1	Cargo	—	10,000	—	13.5	Sin.-scr., 5-cyl. Doxford diesel	—	Hawthorn Leslie	Sir James Laing
Commonwealth and Foreign Yards										
Hamburg-Suda merikanische Damps.-Ges.	2	Cargo	—	12,000 (each)	—	—	Diesel	—	—	Howaldtswerke, Hamburg
J. A. Reinecke, Hamburg	1	Cargo	1,000	1,530	211.6 b.p. 34 - 17.1	—	Diesel	830	—	Norderwerft, Hamburg
Stern-Linie, Lubbeck	1	Cargo	—	950	—	—	Diesel	—	—	Werft Nobiskrug, Rendsburg
Straits S.S. Co., Singapore	1	Cargo	—	700	—	—	Diesel	—	—	Taikoo Dockyard & Eng. Co. of Hong Kong
Den Norske Amerika Linie, Oslo	1	Tanker & ore carrier	—	12,000	—	—	—	—	—	Gothenburg yard
A.S. Det Dansk-Franske Damps., Copenhagen	2	Cargo	—	6,200 (each)	—	—	—	—	—	Elsinore S.B. & E. Co.
Ertel, Bieber & Co., Hamburg	1	Cargo	850	1,400	229.7 o.a. 34.8 - 14.1 (draught)	—	Diesel	—	—	August Pahl, Finkenwerder, Hamburg
Hendrik Fisser A.G., Emden	1	Cargo	500	—	—	—	Diesel	—	—	Gutehoffnungshutte Walsum-on-Rhine
U.S. Maritime Administration	5	"Mariner" class cargo	—	12,500 (each)	525 b.p. 76 - 29.66 (draught)	20	Steam	—	—	New York S.B. Co., Camden, N.J.

## LAUNCHES

## Yards in Great Britain and Northern Ireland

Date	Shipowners	Ship's Name and/or Yard No.	Type	Approximate Tonnages		Dimensions (ft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
				Gross	Deadweight						
July 2	Lorentzen & Co., Oslo	France Slave (1411)	Tanker	15,500	24,000	623.5 o.a. and 580 b.p. 78 - 42.5	—	Sin.-scr., 7-cyl., 2-str. B. & W. diesel	—	Shipbuilders	Harland & Wolff, Belfast
July 3	British Electricity Authority	Brunswick Wharf	"Flatiron" collier	1,730	2,700	257 L.w.l. 39.5 - 18.5	10.5	cr.-exp. reheat steam	—	George Clark (1938)	S. P. Austin
July 4	Anglo-Saxon	Jentayu	Lighter	150	—	—	—	Tw.-scr. diesel	—	—	Clelands (Successors)

## TRIAL TRIPS

## Yards in Great Britain and Northern Ireland

Date	Shipowners	Ship's Name and/or Yard No.	Type	Approximate Tonnages		Dimensions (ft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
				Gross	Deadweight						
—	British Electricity Authority	Blackwall Point (408)	Collier	1,770	2,700	260 b.p. 39.5 - 18.5	10.5	Sin.-scr., 8-cyl., 2-str. Sulzer diesel	1,280	George Clark (1938)	S.P. Austin
June —	Peruvian Govt.	Maranon (4127) Ucayali (4126)	River-gunboats	each 350 (disp.)	—	154.75 w.l. 32 - 4 (draught)	12	Tw.-scr. British Polar diesel	800	—	John I. Thornycroft
June —	British Ryds.	Norfolk Ferry (661)	Harwich-Zebrugge train ferry	3,135	—	397.5 o.a. and 380 b.p. 61.5 - 34.75	13	Tw.-scr., 6-cyl., 2-str. Sulzer diesel	—	Shipbuilders	John Brown
June —	North of Scotland & Orkney & Shetland S.N. Co.	St. Ola (733)	Pass. & cargo	630	—	167 - 33.2 - 9.5	13	Sin.-scr., 7-cyl., 2-str. diesel	1,025	Atlas Polar Engines	Alex. Hall
June 29	N.V. Maats. Zeevaart, Rotterdam	Callisto (506)	Cargo	5,900	10,320	435 b.p. 58.75 - 38	—	Sin. scr., 4-cyl., 2-str. Doxford diesel	3,300	N.E. Marine	Short Bros.
July 2	T. & J. Harrison	Wayfarer	Cargo	8,150	10,000	460 o.a. 59.5 - 37.66	12.5	Sin.-scr., 4-cyl., 2-str. diesel	—	Shipbuilders	Wm. Doxford
June —	Westfal-Larsen & Co., Bergen	Sandanger (489)	Cargo	5,700	8,100	450.5 o.a. and 420 b.p. 57 - 39	17	Sin.-scr., 6-cyl., 2-str. B. & W. diesel	6,900	Shipbuilders	Akers M.V., Oslo
June —	Witt, Wilhelmssen, Oslo	Thalatta (133)	Cargo liner	5,000	8,000	454.83 o.a. and 420 b.p. 40 - 29	16.5	Sin.-scr., 7-cyl., 2-str. diesel	7,500	Stork & Co., Hengelo	Kaldnes M.V., Tonsberg
June 5	Angfartys A/B Tirfing, Gothenburg	Vasaland (407)	Cargo liner	4,365	5,900	400 b.p. 57.66 - 25.25	16.5	Sin.-scr., 2-str. B. & W. diesel	6,700	Shipbuilders	Ericksbergs M.V., Gothenburg
June 7	Rederi A/B Concordia, Gothenburg	Bellona (653)	Tanker	8,350	13,020	483.5 o.a. 59 - 35.5	13	Sin.-scr., 6-cyl., 2-str. diesel	5,200	Shipbuilders	Gotaverken, Gothenburg
June 21	Olsen & Ugelstad, Oslo	Sognefjell (409)	Tanker	15,800	24,350	570 b.p. 77 - 42.75	14	Sin.-scr., 9-cyl., 2-str. B. & W. diesel	8,500	Shipbuilders	Ericksbergs M.V., Gothenburg
June 21	Stockholms Rederi A/B Svea, Stockholm	Sriothod (325)	Tanker	10,650	16,225	533.25 o.a. and 500 b.p. 63 - 38.5	15	Sin.-scr., 6-cyl., 2-str. M.A.N. diesel	6,000	Shipbuilders	Kockums M.V., Malmo



## MARITIME NEWS IN BRIEF

From Correspondents at Home and Overseas

**D**R. GEORGE WEBSTER, Lloyd's Register Principal Surveyor for Scotland, will retire at the end of September after 37 years' service with the Society. His earlier career included over six years in London, a short time in Japan, nearly five years at Gothenburg and a year in Oslo. He was appointed Principal Surveyor at Glasgow in 1935, and became Principal Surveyor for Scotland in 1944. Dr. Webster received the O.B.E. in January, 1946.

Mr. W. L. REES has retired from the secretaryship of the Houlder Line after 52 years' service with Houlder Bros. & Co., Ltd. Mr. F. W. Whittle has been appointed secretary of Houlder Line, Ltd., and will also continue as chief accountant of this company. Mr. Rees's other secretaryships have been divided up. Mr. Maurice Grindler becomes secretary of Empire Transport Co., Ltd.; Mr. E. S. Jones of British Empire Steam Navigation Co., Ltd.; and Mr. S. Jockel of South American Stevedoring & Lighterage Co., Ltd.

Two Japanese lines have been admitted to membership of the Far East Conference, covering operations from U.S. Atlantic and Gulf ports to Japan, Formosa, Indo-China and the Philippines. They are the Mitsui Steamship Co. and the Nippon Yusen Kaisha; both of which have recently been authorised to open services from Japan to U.S. Atlantic ports.

THE SERVICE between Leith and Grangemouth and Amsterdam is now being maintained jointly by The Holland Steamship Company and the Gibson Rankine Line, with an improved sailing schedule. Details may be obtained from British Amsterdam Maritime Agencies, Ltd., 37 Fenchurch Street, London, E.C.3.

REGULAR shipping services between India and Japan have been resumed after nine years with the arrival in Bombay of the *Shunkomaru*, owned by the Nippon Yusen Kaisha.

**T**HREE new directors have been appointed to the board of Drysdale & Co., Ltd. Mr. C. H. Carslaw, previously chief designer, is now technical director, and Mr. T. L. Mackie, sales manager, is now sales director. Mr. F. J. B. Henderson was chief of the purchase department and material and supply officer before being appointed to the board.

THE U.S. Maritime Administration has ordered five more "Mariner" class cargo vessels at a cost of \$9,290,000 (about £3,317,000) each, or some \$800,000 (about £280,000) more than the highest price of the "Mariner" ships ordered last February. The new contract has gone to the New York Shipbuilding Co., of Camden, New Jersey, whose tender of \$12,227,000 (about £3,295,000) for each of five vessels was rejected last February as too high.

THE tonnage of trade dealt with at the South Wales ports of Cardiff, Swansea, Newport, Barry, Port Talbot, Penarth and Briton Ferry during the four weeks ended June 17 amounted to 1,668,564 tons, an increase of 214,434 tons over the corresponding period last year. It was the highest four-

weekly tonnage handled since the four-weekly period ended June 23, 1940.

THE Clyde Navigation Trustees will make their annual inspection again this year, after a lapse of a year. The date selected is September 18, when the Trustees, representing the city, the shipping interests, commerce and industry, will inspect the harbour and various works in progress.

THE Anglo-Saxon Petroleum Co., Ltd., has presented a "Shell" scholarship to Gordonstoun School, Elgin, Morayshire, for annual competition. The successful student will normally be expected to proceed after graduation to the service of the company as a cadet.

NEW OFFICES have been opened by Andrew Weir & Co., Ltd., insurance brokers, at Plantation House, Mincing Lane, London, E.C.3. The registered office of the company will remain at 21 Bury Lane, E.C.3.

THE Burns & Laird vessel *Lairdsglen* has been sold for breaking up. A ship of 1,276 tons gross, she was built in 1914.

**A** NEW FACTORY is being brought into production by Decca Radar, Ltd., which will effectively double existing facilities. The company has been unable to produce sufficient sets to meet the demand. More than 1,000 ships are now contracted for the fitting of Decca radar. A further 16 ships of the whaling fleet of Anders Jahre & Co., A/S, are being fitted, following the successful installation of five ships last year.

THE General Steam Navigation Company's paddle steamer *Golden Eagle* is being sold for breaking up. The *Golden Eagle* was built in 1909 by John Brown & Co., Ltd., and was for many years the pride of the Eagle Steamer fleet. For the greater part of her career she was on the London-Southend-Margate run, now operated by the new motorship *Royal Sovereign*.

THE old-established steam valve manufacturing business of W. Ross & Sons, Ltd., of Hillington, Glasgow, has been acquired by British Plaster Boards, Ltd., of Wallasey. The Glasgow firm has been in business for some 60 years as manufacturing sanitary engineers, and in 1946 opened their Hillington factory for the mass production of steam valves for marine and other purposes.

DUTCH, Belgian and West German port authorities will meet in Rotterdam from September 25 to 27 for discussions on inter-port cooperation. Representatives have been invited from the ports of Amsterdam, Rotterdam, Antwerp, Ghent, Hamburg, Bremen and Lubeck.

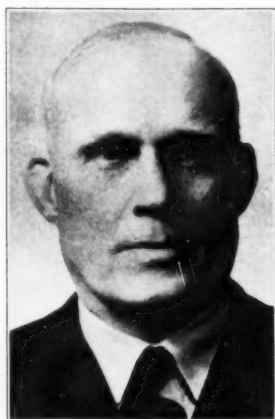
TRAFFIC passing inward through the Humber ports for the first 24 weeks of 1951 shows an increase over the corresponding period of 1950 of nearly 350,000 tons. Of this, a 224,000-ton improvement was contributed by oils and spirits.

SHARPSNESS DOCKS, on the River Severn, recently received its first cargo of fresh fruit and vegetables with the arrival of the motor vessel *Penon de Huach*.



MR. A. D. KERR, chief draughtsman of Drysdale & Co. Ltd., the Scottish pump makers, was awarded the M.B.E. in the recent King's Birthday honours. Mr. Kerr has been in the service of Drysdale & Company since he began his apprenticeship in 1909. After passing through various stages of promotion, he was appointed chief draughtsman in 1927.

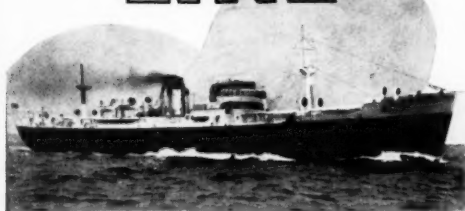
CAPT. D. R. PATERSON, present master of the tanker *Tanea*, is to retire shortly after 36 years' service with the Shell tanker fleet, of which 23 years were spent in New Zealand waters in command of the *Paua*. Capt. Paterson, a former cadet in the training ship *Conway*, served in sail before joining the Anglo-Saxon Petroleum Co. as a third officer in 1914. He obtained his first command, that of the *Min*, in 1921. Following service as master of various other Shell vessels, he took command of the *Paua* on her first arrival in New Zealand in 1927, continuing as master until she was sold last December.



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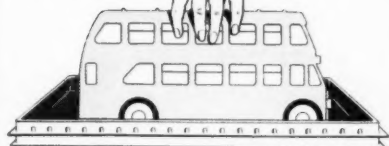
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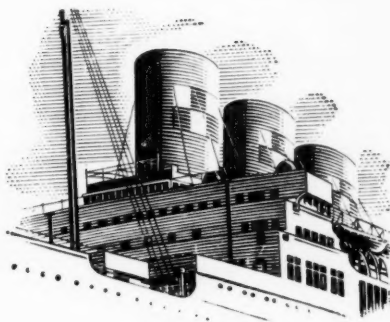
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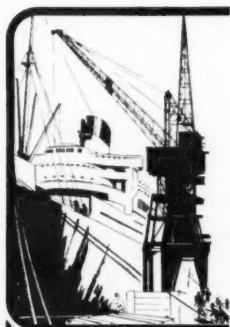
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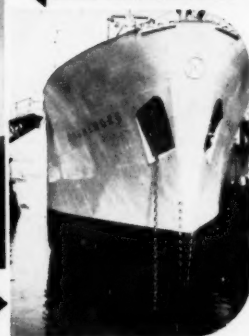
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